C305– Eastern Running Tunnels

I&M Close out report from Stepney Green Shaft to Whitechapel Station (Drive Y)

CRL Document Number: C305-DSJ-C2-RGN-CRG03-50381

Supplier Document Number:

Contract MDL reference C08.079

1. Contractor Document Submittal History:

Revision:	Date:	Prepared by:	Checked by:	Approved by:	Reason for Issue:
2.0	05-05-2016	[redacted]	[redacted]	[redacted]	For Approval

2a. Stakeholder ReviewRequired? YES ☐NO☐

Stakeholder submission required: LU ☐ RfL ☐ NR ☐ LO ☐ DLR ☐ 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: _____ Role: _____ Name: _____ Date: _____

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

2b. Review by Stakeholder (if required):

Stakeholder Organisation	Job Title	Name	Signature	Date	Acceptance
					☐

3. Acceptance by *Crossrail*:

	***Crossrail* Review and Acceptance Decal** This decal is to be used for submitted documents requiring acceptance by *Crossrail*.	
☑	Code 1.	Accepted. Work May Proceed
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☐	Code 4.	Received for information only. Receipt is confirmed

Reviewed/Accepted by:(signature)	Print Name:	Position:	Date:
[redacted]	[redacted]	[redacted]	19/5/16

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GEOCISA UK	C305-GEO-CLOUT-A8-20151126

I&M Close out report from Stepney Green Shaft to Whitechapel Station (Drive Y)

C305 Crossrail Eastern Running Tunnels

Current Version of the Documents & Signatures :

Revision:	Date:	Prepared by:	Checked by:	Engineering Approved by:
2.0	05.05.16	[redacted]	[redacted]	[redacted]
		[redacted]		

Document History :

Revision:	Date:	Prepared by:	Checked by:	Engineering Approved by:
1.0	13.01.16	[redacted]	[redacted]	[redacted]

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1. CLOSE OUT REPORT PURPOSE

As stated in the specification: C122-OVE-Z4-RSP-CR001-00007 Rev 7.0, the purpose of this close-out report is to summarise the data from the instrumentation included in this document and to relate the recorded movements to the construction activities and dewatering of cross passages which produce any observed changes. For construction activities it is intended excavation of the C305 twin bored tunnels and construction of Cross-Passage 9 (excavation and depressurization); impacts from other CRL contracts are not included in this report.

The long term readings have been used to demonstrate that the subsequent movement has reached an acceptably stable rate within the accuracy of the system in order to decommission and/or that C305 works are no longer impacting the area concerned.

As stated in the specifications the settlement rate of 2mm/year has been defined. Where this is not achieved this report seeks agreement from all parties that the rate is acceptably low enough to cease monitoring and decommission.

2. LOCATION OF THE WORKS

The instrumentation included in this report is located within Area 8, Stepney Green Shaft to Cambridge Heath Road in Whitechapel Station, between project chainage 80500 and 79750.

See appendix A for the instrument location.

3. DOCUMENTATION SUMMARY

CROSSRAIL NUMBER	DOCUMENT NAME	REASON FOR ISSUE
C305-DSJ-C2-GMS-CR094_PT002-50020	Method Statement I&M Ratcliff Sewer Boreholes	Main Method Statement
C305-DSJ-C2-GMS-CR094_WS108-50006	Method Statement I&M Section B Stepney Green Park Boreholes	Main Method Statement
C305-DSJ-C2-GMS-CR094_WS108-50010	Method Statement: C305 I&M Boreholes sections Q&Q&R Mile End Road	Main Method Statement
C305-DSJ-C2-GMS-CR094_WS108-50008	I&M Studs installation from Stepney Green to Whitechapel (80500 to 79800)	Main Method Statement
C305-DSJ-C2-GMS-CR094_WS108-50009	I&M Sockets/Prisms Installation & Monitoring from Stepney Green to Whitechapel (80500 to 79800)	Main Method Statement
C305-DSJ-C2-RGN-CRG03-50169	I&M Installation Report for Radcliff Sewer Boreholes (Drive Y)	Installation report
C305-DSJ-C2-RGN-CRG03-50170	I&M Installation Report for Section B Stepney Green Park Boreholes (Drive Y)	Installation report
C305-DSJ-C2-RGN-CRG03-50166	I&M Installation Report for Boreholes Sections Q&Q&R Mile End Road	Installation report
C305-DSJ-C2-RGN-CRG03-50165	I&M Installation Report for Levelling points & Sockets & 3D Prisms from Stepney Green to Whitechapel (Drive Y)	Installation report

4. SUMMARY OF INSTALLED INSTRUMENTATION ON SITE

The total number instruments installed as per method statement and RFIs, was:

- 372 – Levelling points
- 129 – Sockets
- 18- 3D Prisms
- 11- Retro Targets
- 6 – Rod Extensometers
- 4 – Shallow Datums
- 6 – Inclinometers
- 6 – Vibrating Wire Piezometers

See appendix B for further information of the installed instrumentation.

The average commissioning readings included in appendix B have been used to calculate the relative movements provided in the graphs of this report. In some of them, new values were determined as a baseline according to the requirement of the client in CTC meeting. The dates of the new baselines are as follows:

- C305-LP081201 - C305- LP081224: 13th November 2013
- C305-LB081601 - C305- LB081608: 16th December 2013

5. CONSTRUCTION ACTIVITY

TBM PASSAGE

DRIVE Y	RINGS	PROJECT CHAINAGE	DATES
Eastbound	2456 – 2988	80600 – 79730	23/11/2013 to 22/01/2014
Westbound	2440 – 2971	80600 – 79730	20/02/2014 to 05/04/2014

Stoppage period

Eastbound Drive-Y	Ring 2524 (Project chainage 80465)	29/11/2013 to 04/12/2013
	Ring 2585 (Project chainage 80367)	07/12/2013 to 09/12/2013
	Ring 2753 (Project chainage 80103)	20/12/2013 to 06/01/2014
Westbound Drive-Y	Ring 2607 (Project chainage 80324)	08/03/2014 to 10/03/2014
	Ring 2710 (Project chainage 80157)	15/03/2014 to 17/03/2014
	Ring 2800 (Project chainage 80010)	22/03/2014 to 24/03/2014

Ring 2904 (Project chainage 79841) 29/03/2014 to 31/03/2014

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

CROSS PASSAGE 9

CP9 excavation	28th November 2014 to 23rd February 2015
CP9 depressurisation	11th March 2015 to 20th May 2015
Sump excavation	13th March 2015 to 27th April 2015

DEWATERING

Stepney Green Shaft	September 2012 (still on)

6. METHODOLOGY

To determine the settlement rate the following methodology has been used. A Linear Regression has been applied for a defined period using long term readings after TBM construction. This uses the following formula.

$$b = \frac{\sum_{i=1}^{n} X_i - \bar{X}_i \cdot Y_i - \bar{Y}_i}{\sum_{i=1}^{n} X_i - \bar{X}_i^{\,2}}$$

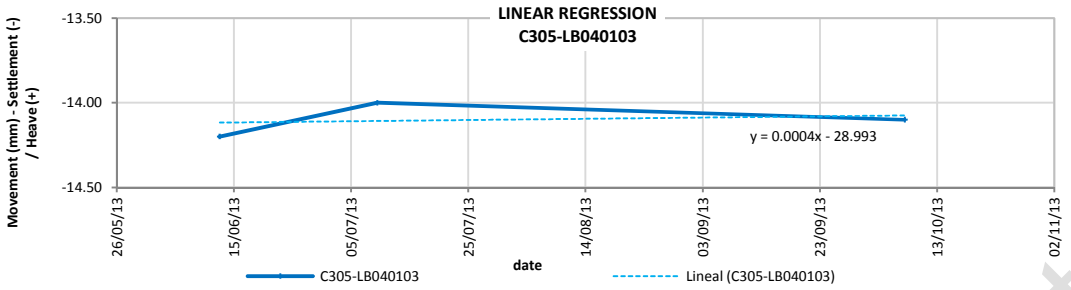
Where:

B =gradient or slope
X (independent variable) = date
Y (dependent variable) = vertical movement

From this, the settlement rate per day can be calculated and rate per year determined (negative value is for settlement, positive is for heave). For these values, the percentage at or below 2mm/yr will be used to determine the trend of the section/area being considered. Also for comparison, values at or below 3mm/year are presented to highlight that the rate is close to achieving the 2mm/yr. Note the percentages of settlement rate presented in the sections below refer to values rounded to the nearest integer.

One example of this calculation can be seen below for one socket and its projection.

	Registered movement (mm)			RATE mm/year
	12/06/2013	09/07/2013	07/10/2013	
C305-LB040103	-14.20	-14.00	-14.10	0.146



CALCULATION - C305-LB040103

X_i	Y_i	$X_i - \bar{X}_i$	$Y_i - \bar{Y}_i$	$(X_i - \bar{X}_i)^2$	$X_i - \bar{X}_i \cdot Y_i - \bar{Y}_i$
12/06/2013	-14.2	-47.94	-0.10	2298.67	4.794
09/07/2013	-14	-21.03	0.10	442.17	-2.103
07/10/2013	-14.1	68.97	0.00	4757.17	0.000

X_i		41485.53	
Y_i		-14.10	
$\sum_{i=1}^{n} X_i - \bar{X}_i^2$		7498.00	(2)
$\sum_{i=1}^{n} X_i - \bar{X}_i \cdot Y_i - \bar{Y}_i$		2.692	(1)
m (SLOPE)	(1)/(2)	0.0004	
Rate (mm/year)	m * 365	0.146	

7. SUMMARY OF THE DATA

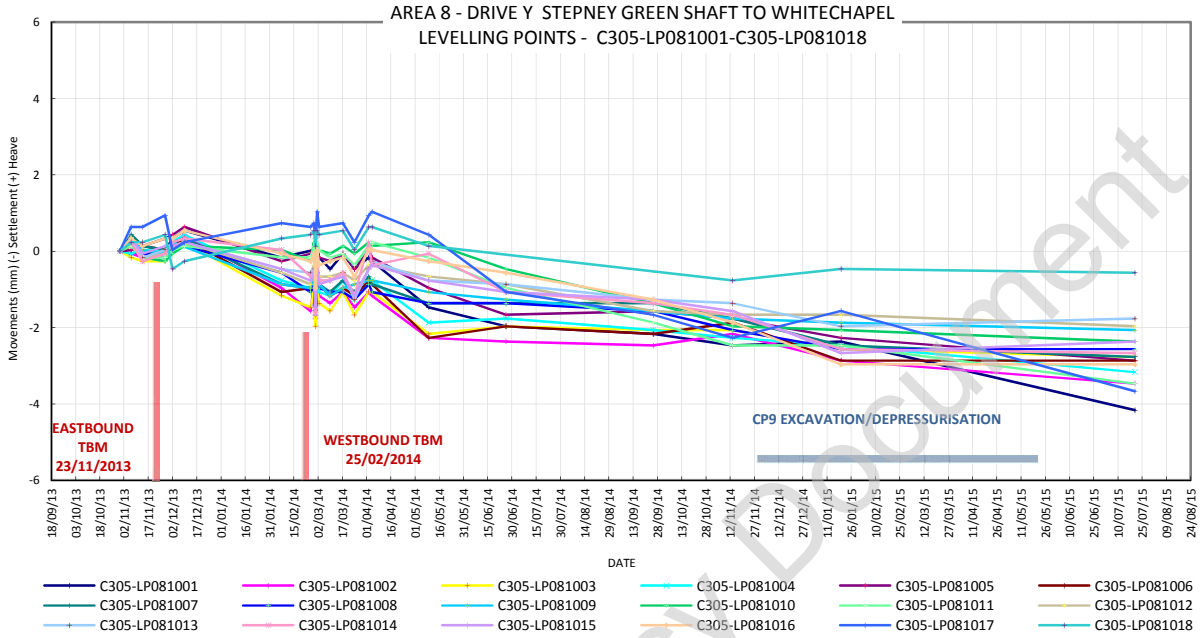
The methodology described for sockets in section 6 is applied here for levelling points, sockets and rod extensometers.

Note: For the following data plots #N/A refers to instances where readings were not taken for that sensor (e.g. damaged sensor, no access, etc)

As described in the C122 I&M Plan (C122-OVE-C2-RGN-CRG01-50070), for levelling points situated in the vicinity of 3rd party utility assets, deflection ratio values are provided in appendix D.

LEVELLING POINTS

C305-LP081001 - C305-LP081018



As can be seen in the graph above the levelling points recorded: a heave of +1mm followed by a maximum settlement of -1.2mm after the eastbound TBM transit, and a maximum total settlement of -2.5mm after the westbound TBM transit. A total maximum settlement of -4.23mm was recorded after CP9 works.

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

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

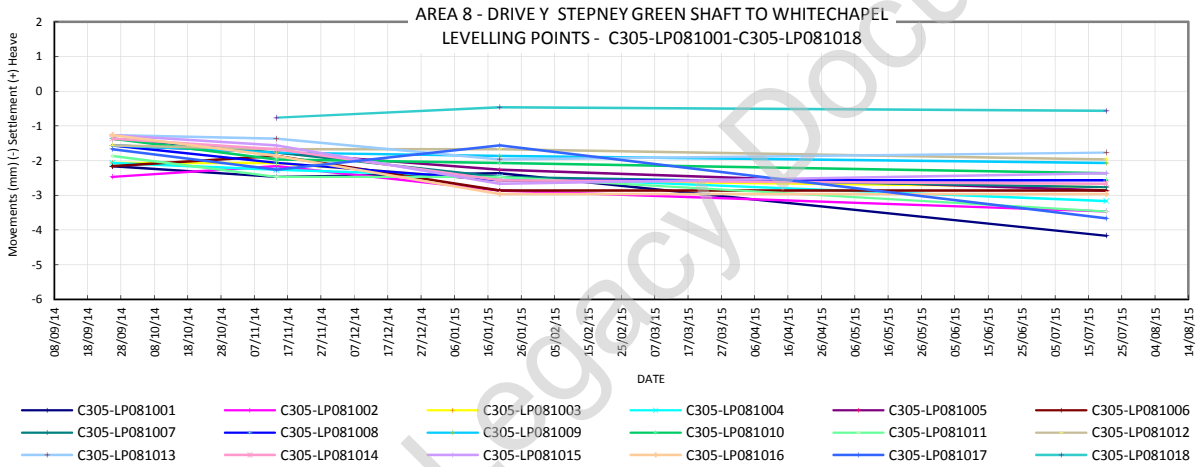
	Registered movement (mm)				Rate (mm/year)
	25/09/2014	13/11/2014	19/01/2015	20/07/2015	
C305-LP081001	-2.17	-2.47	-2.37	-4.17	-2.463
C305-LP081002	-2.47	-2.17	-2.87	-3.47	-1.446
C305-LP081003	-2.07	-2.07	-2.57	-2.77	-0.913
C305-LP081004	-2.07	-2.27	-2.47	-3.17	-1.338
C305-LP081005	-1.57	-1.77	-2.27	-2.87	-1.600
C305-LP081006	-2.17	-1.87	-2.87	-2.87	-1.056
C305-LP081007	-1.37	-1.77	-2.47	-2.77	-1.635
C305-LP081008	-1.57	-2.07	-2.57	-2.57	-1.067
C305-LP081009	-1.57	-1.77	-1.87	-2.07	-0.557
C305-LP081010	-1.37	-1.97	-2.07	-2.37	-1.018
C305-LP081011	-1.87	-2.47	-2.47	-3.47	-1.799
C305-LP081012	-1.57	-1.67	-1.67	-1.97	-0.474
C305-LP081013	-1.27	-1.37	-1.97	-1.77	-0.605

	Registered movement (mm)				Rate (mm/year)
	25/09/2014	13/11/2014	19/01/2015	20/07/2015	
C305-LP081014	-1.37	-1.67	-2.57	-2.67	-1.553
C305-LP081015	-1.27	-1.57	-2.67	-2.37	-1.293
C305-LP081016	-1.27	-1.87	-2.97	-2.97	-1.932
C305-LP081017	-1.67	-2.27	-1.57	-3.67	-2.319
C305-LP081018	#N/A	-0.77	-0.47	-0.57	0.190
	Rate less than -2.5mm/year			% less 2mm/ year	100%
	Rate greater than -3.5mm/year			% less 3mm/ year	100%

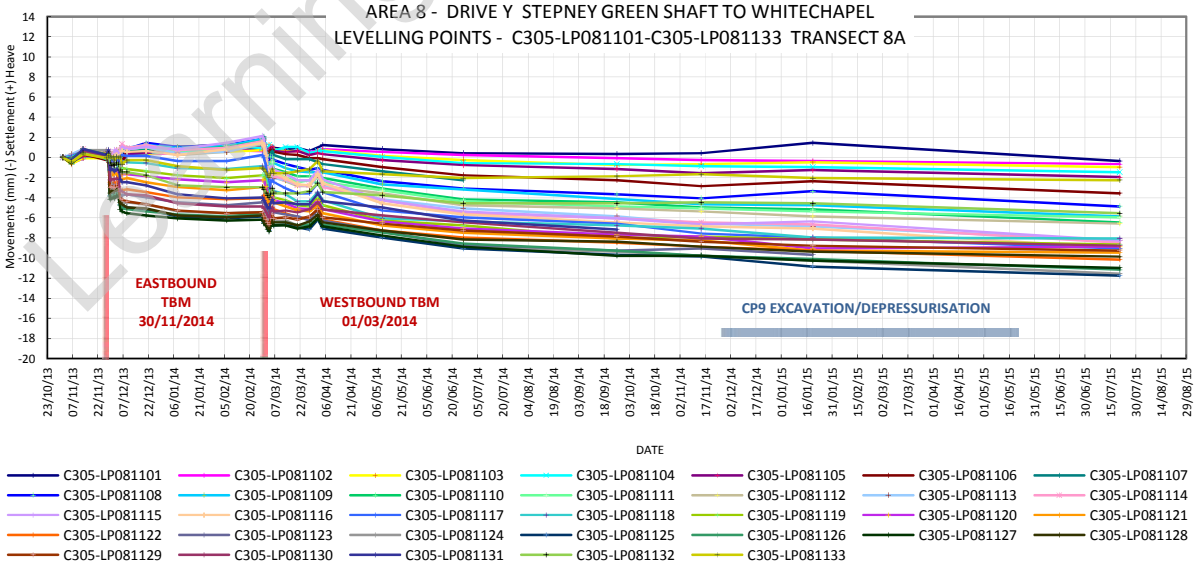
Note: All the movements are in mm. (-) Settlement / (+) Heave

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

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



C305-LP081101 - C305-LP081133 TRANSECT 8A



The graph above shows a maximum settlement of -6mm after the eastbound TBM transit and a -8.9mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -11.8mm was recorded after CP9 works.

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

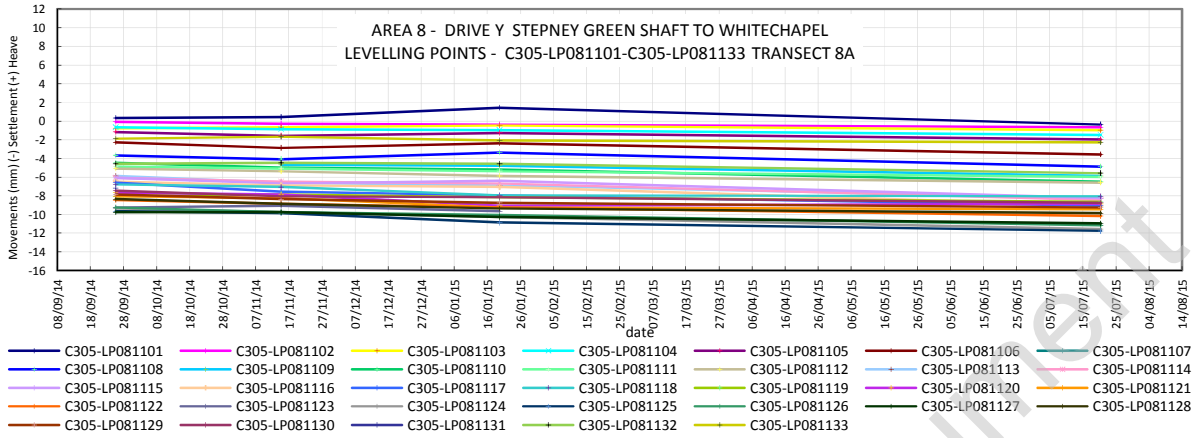
The table below shows the annual rate for the levelling points in this array.

	Registered movement (mm)				Rate (mm/year)
	25/09/2014	14/11/2014	19/01/2015	20/07/2015	
C305-LP081101	0.33	0.43	1.43	-0.37	-0.960
C305-LP081102	-0.07	-0.27	-0.37	-0.67	-0.689
C305-LP081103	-0.77	-0.67	-0.47	-0.97	-0.308
C305-LP081104	-0.67	-0.87	-0.97	-1.47	-0.950
C305-LP081105	-1.17	-1.57	-1.27	-1.97	-0.855
C305-LP081106	-2.27	-2.87	-2.37	-3.57	-1.413
C305-LP081107	#N/A	#N/A	#N/A	#N/A	-
C305-LP081108	-3.67	-4.07	-3.37	-4.87	-1.377
C305-LP081109	#N/A	-4.67	-4.77	-5.87	-1.862
C305-LP081110	-4.47	-4.97	-5.17	-6.47	-2.374
C305-LP081111	-4.87	-5.07	-5.37	-5.97	-1.341
C305-LP081112	-5.07	-5.37	-5.87	-6.57	-1.816
C305-LP081113	-5.87	-6.57	-6.87	-8.27	-2.801
C305-LP081114	-6.07	-6.47	-6.67	-8.47	-2.943
C305-LP081115	-6.07	-6.67	-6.37	-8.27	-2.587
C305-LP081116	-6.47	-6.87	-7.07	-9.07	-3.204
C305-LP081117	-6.57	-7.57	-7.97	-9.07	-2.790
C305-LP081118	-6.77	-7.07	-7.97	-8.07	-1.555
C305-LP081119	-8.07	-7.87	-8.17	-8.67	-0.878
C305-LP081120	-7.67	-7.87	-9.07	-8.87	-1.472
C305-LP081121	-8.07	-8.27	-9.27	-9.47	-1.733
C305-LP081122	-8.47	-8.87	-9.27	-10.17	-2.030
C305-LP081123	-9.27	-9.07	-9.67	#N/A	-1.366
C305-LP081124	-9.37	-9.77	-10.27	-11.57	-2.682
C305-LP081125	-9.67	-9.87	-10.87	-11.77	-2.647
C305-LP081126	-9.27	-9.77	-10.07	-11.17	-2.243
C305-LP081127	-9.77	-9.77	-10.27	-10.97	-1.566
C305-LP081128	-8.37	-8.87	-9.37	-9.87	-1.721
C305-LP081129	-7.87	-8.37	-8.77	-9.27	-1.591
C305-LP081130	-7.47	-8.07	-8.17	-8.77	-1.413
C305-LP081131	-7.17	#N/A	#N/A	#N/A	-
C305-LP081132	-4.57	-4.47	-4.57	-5.57	-1.352
C305-LP081133	-1.87	-1.67	-2.07	-2.27	-0.617
	Rate less than -2.5mm/year			% less 2mm/ year	77%
	Rate greater than -3.5mm/year			% less 3mm/ year	100%

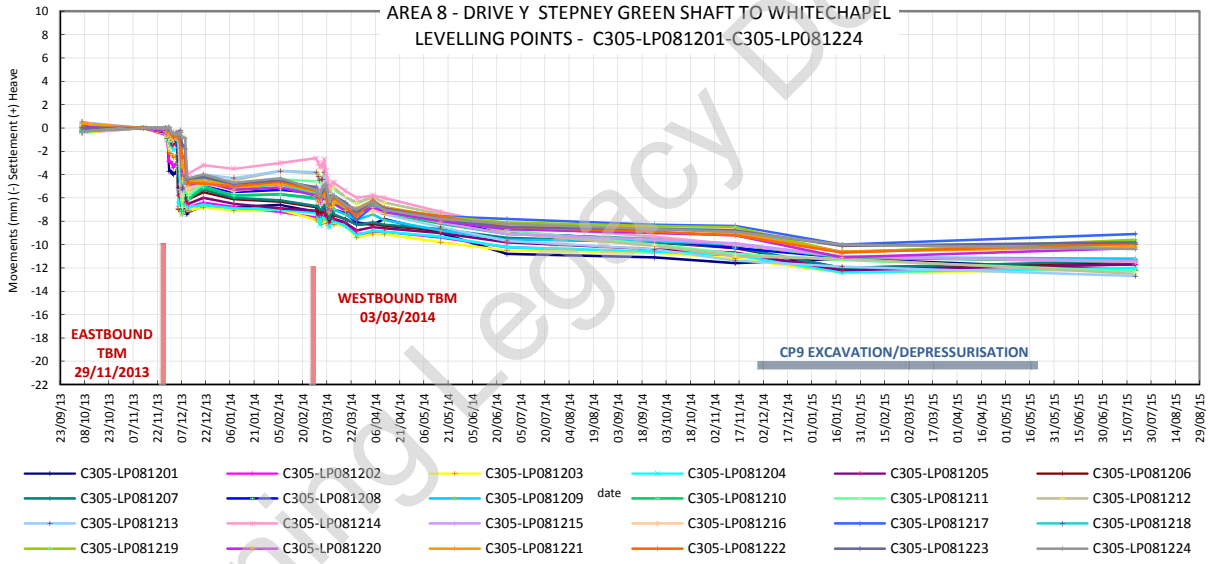
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of levelling points with a settlement rate less than 2mm/year is 77%, whereas 100% are less than 3mm/year.

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



C305-LP081201 - C305-LP081224



The graph above shows a maximum settlement of -7.4mm after the eastbound TBM transit and a -8.8mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -12.7mm was recorded after CP9 works.

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

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

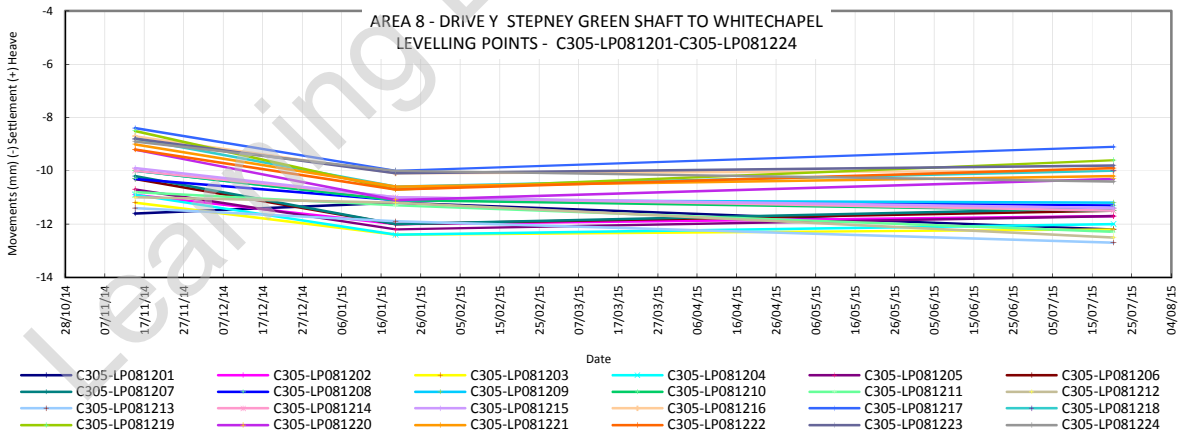
	Registered movement (mm)			Rate (mm/year)
	14/11/2014	19/01/2015	20/07/2015	
C305-LP081201	-11.60	-11.20	-12.20	-1.123
C305-LP081202	-10.90	-12.00	-11.70	-0.799

	Registered movement (mm)			Rate (mm/year)
	14/11/2014	19/01/2015	20/07/2015	
C305-LP081203	-11.20	-12.40	-12.20	-1.074
C305-LP081204	-10.90	-12.40	-12.00	-1.104
C305-LP081205	-10.70	-12.20	-11.70	-0.946
C305-LP081206	-10.30	-12.00	-11.50	-1.177
C305-LP081207	-10.20	-12.00	-11.40	-1.135
C305-LP081208	-10.30	-11.10	-11.30	-1.245
C305-LP081209	-10.00	-11.10	-11.20	-1.434
C305-LP081210	-10.00	-11.10	-11.50	-1.910
C305-LP081211	-10.80	-11.30	-12.30	-2.167
C305-LP081212	-11.00	-11.20	-12.50	-2.295
C305-LP081213	-11.40	-11.90	-12.70	-1.849
C305-LP081214	-10.00	-11.00	-11.50	-1.953
C305-LP081215	-9.90	-11.00	-11.40	-1.910
C305-LP081216	-8.70	-10.10	-10.00	-1.465
C305-LP081217	-8.40	-10.00	-9.10	-0.427
C305-LP081218	-8.80	-10.60	-10.00	-1.135
C305-LP081219	-8.50	-10.70	-9.60	-0.805
C305-LP081220	-9.20	-11.10	-10.30	-0.933
C305-LP081221	-9.00	-10.60	-10.20	-1.220
C305-LP081222	-9.20	-10.70	-9.90	-0.469
C305-LP081223	-8.80	-10.10	-9.80	-1.031
C305-LP081224	-8.90	-10.00	-10.40	-1.910
	Rate less than -2.5mm/year		% less 2mm/ year	100%
	Rate greater than -3.5mm/year		% less 3mm/ year	100%

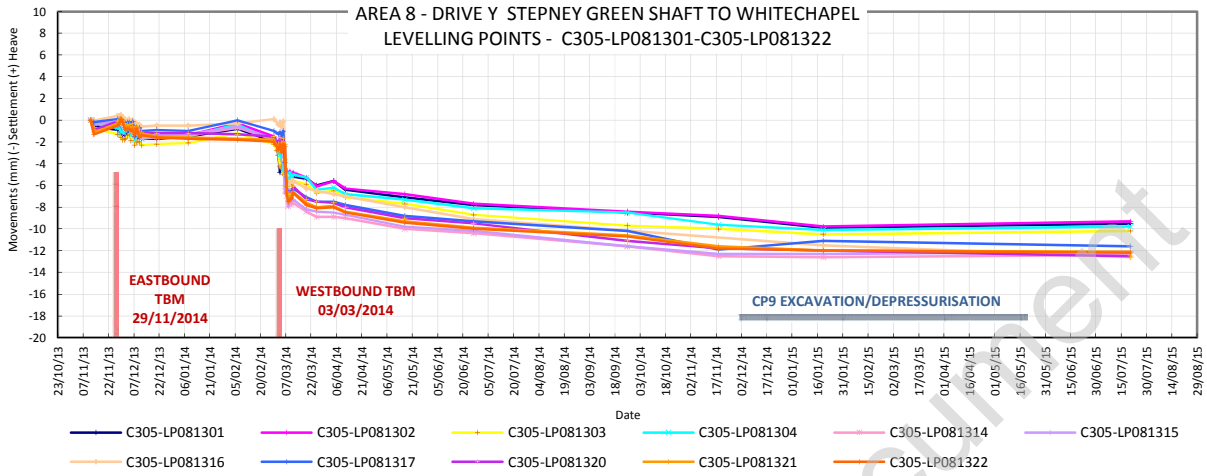
Note: All the movements are in mm. (-) Settlement / (+) Heave

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

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



C305-LP081301 - C305-LP081322



The graph above shows a maximum settlement of -1.7mm after the eastbound TBM transit and a -9.4mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -12.6mm was recorded after CP9 works.

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

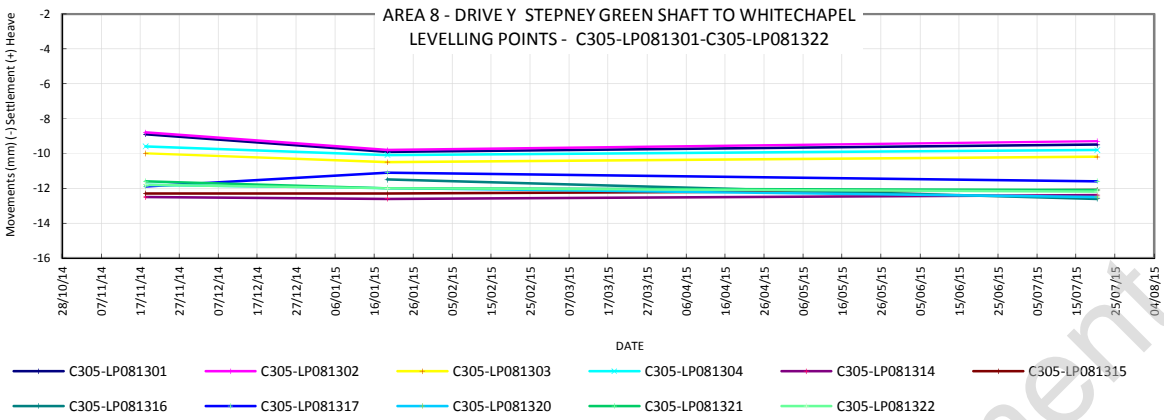
The table below shows the annual rate for the levelling points in this array.

	Registered movement (mm)			Rate (mm/year)
	18/11/2014	19/01/2015	20/07/2015	
C305-LP081301	-8.90	-9.90	-9.50	-0.513
C305-LP081302	-8.80	-9.80	-9.30	-0.352
C305-LP081303	-10.00	-10.50	-10.20	-0.095
C305-LP081304	-9.60	-10.10	-9.80	-0.095
C305-LP081314	-12.50	-12.60	-12.40	0.207
C305-LP081315	-12.30	-12.30	-12.10	0.322
C305-LP081316	#N/A	-11.50	-12.60	-2.206
C305-LP081317	-11.90	-11.10	-11.60	0.120
C305-LP081320	-11.80	-12.00	-12.50	-1.037
C305-LP081321	-11.60	-12.00	-12.10	-0.624
C305-LP081322	-11.80	-12.00	-12.20	-0.554
	Rate less than -2.5mm/year		% less 2mm/ year	100%
	Rate greater than -3.5mm/year		% less 3mm/ year	100%

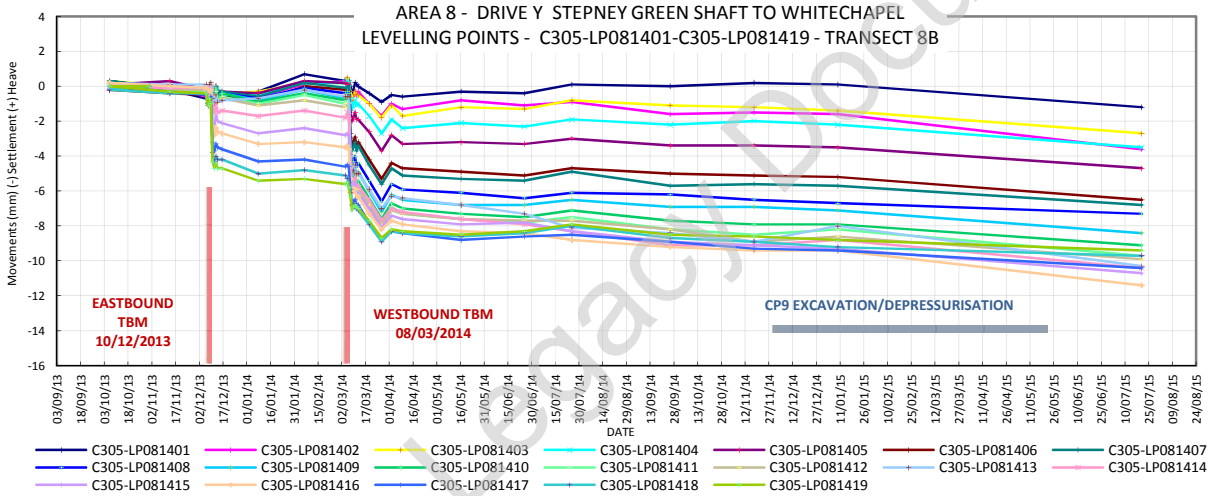
Note: All the movements are in mm. (-) Settlement / (+) Heave

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

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



C305-LP081401 - C305-LP081419 TRANSECT 8B



The graph above shows a maximum settlement of -5.4mm after the eastbound TBM transit and a -8.7mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -11.4mm was recorded after CP9 works.

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

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

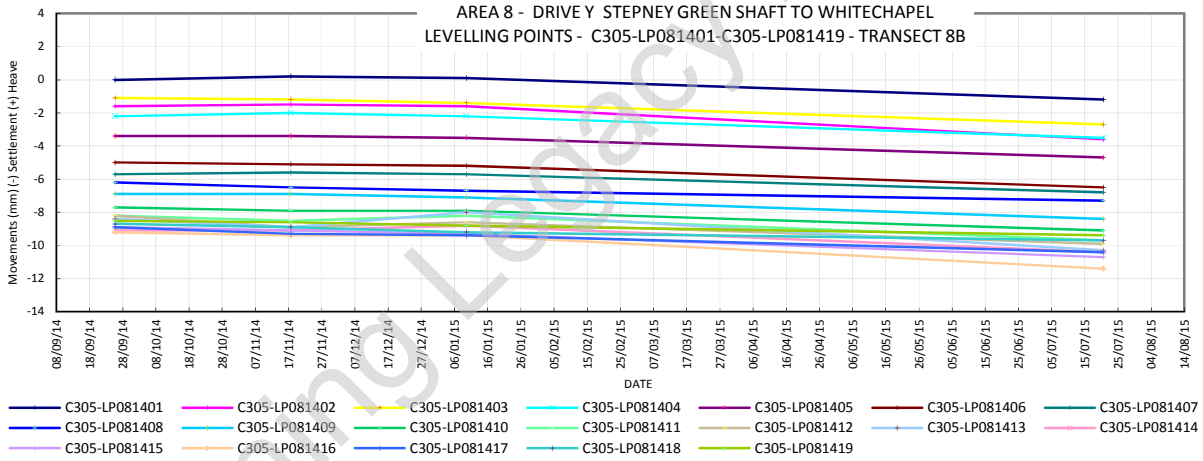
	Registered movement (mm)				Rate (mm/year)
	25/09/2014	17/11/2014	09/01/2015	20/07/2015	
C305-LP081401	0.00	0.20	0.10	-1.20	-1.684
C305-LP081402	-1.60	-1.50	-1.60	-3.60	-2.694
C305-LP081403	-1.10	-1.20	-1.40	-2.70	-2.058
C305-LP081404	-2.20	-2.00	-2.20	-3.50	-1.811
C305-LP081405	-3.40	-3.40	-3.50	-4.70	-1.717
C305-LP081406	-5.00	-5.10	-5.20	-6.50	-1.931
C305-LP081407	-5.70	-5.60	-5.70	-6.80	-1.502

	Registered movement (mm)				Rate (mm/year)
	25/09/2014	17/11/2014	09/01/2015	20/07/2015	
C305-LP081408	-6.20	-6.50	-6.70	-7.30	-1.295
C305-LP081409	-6.90	-6.90	-7.10	-8.40	-1.976
C305-LP081410	-7.70	-7.90	-7.90	-9.10	-1.755
C305-LP081411	-8.20	-8.50	-8.20	-9.70	-1.855
C305-LP081412	-8.20	-8.90	-8.60	-9.90	-1.920
C305-LP081413	-8.40	-8.90	-8.00	-10.30	-2.321
C305-LP081414	-9.10	-9.10	-8.80	-10.40	-1.741
C305-LP081415	-8.90	-9.10	-9.30	-10.70	-2.273
C305-LP081416	-9.20	-9.40	-9.40	-11.40	-2.815
C305-LP081417	-8.90	-9.30	-9.40	-10.40	-1.781
C305-LP081418	-8.70	-8.90	-9.20	-9.70	-1.207
C305-LP081419	-8.50	-8.60	-8.80	-9.40	-1.130
	Rate less than -2.5mm/year			% less 2mm/ year	89%
	Rate greater than -3.5mm/year			% less 3mm/ year	100%

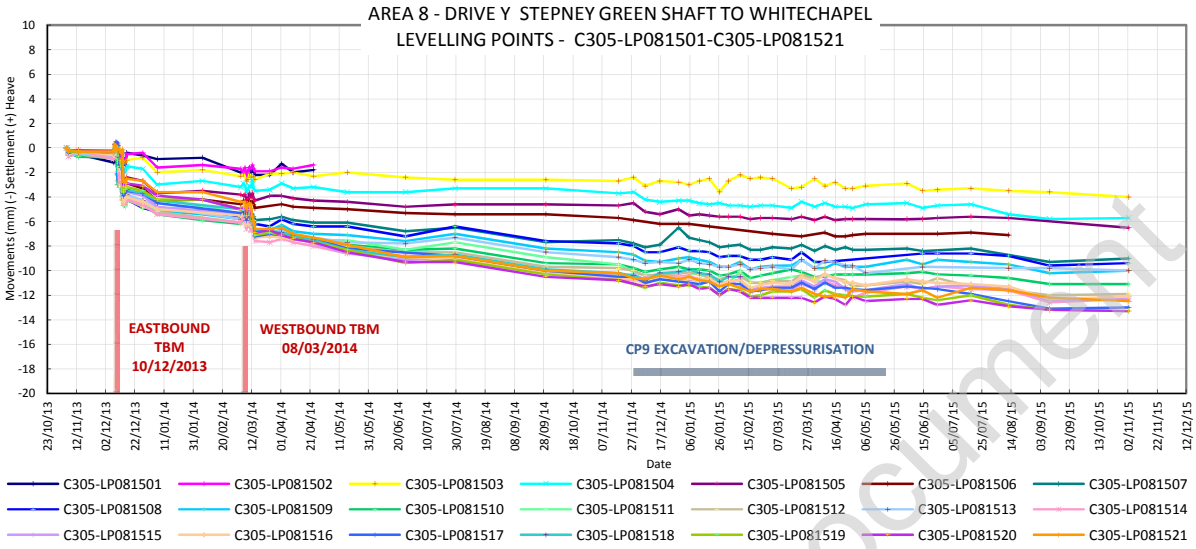
Note: All the movements are in mm. (-) Settlement / (+) Heave

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

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



C305-LP081501 - C305-LP081521



The graph above shows a maximum settlement of -6.1mm after the eastbound TBM transit and a -10.5mm total maximum settlement after the Westbound TBM transit. A total maximum settlement of -113.3mm was recorded after CP9 works.

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

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

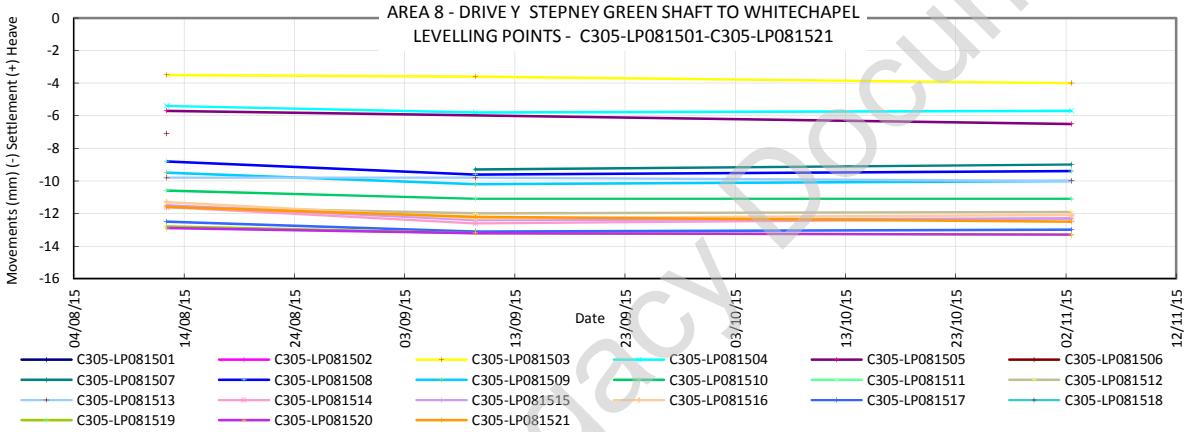
	Registered movement (mm)			Rate (mm/year)
	12/08/2015	09/09/2015	02/11/2015	
C305-LP081501	#N/A	#N/A	#N/A	-
C305-LP081502	#N/A	#N/A	#N/A	-
C305-LP081503	-3.50	-3.60	-4.00	-2.288
C305-LP081504	-5.40	-5.80	-5.70	-1.063
C305-LP081505	-5.70	#N/A	-6.50	-3.541
C305-LP081506	-7.10	#N/A	#N/A	-
C305-LP081507	#N/A	-9.30	-9.00	2.008
C305-LP081508	-8.80	-9.60	-9.40	-2.126
C305-LP081509	-9.50	-10.20	-10.00	-1.741
C305-LP081510	-10.60	-11.10	-11.10	-1.923
C305-LP081511	#N/A	#N/A	#N/A	-
C305-LP081512	-11.60	-12.00	-11.90	-1.063
C305-LP081513	-9.80	-9.80	-10.00	-0.952
C305-LP081514	-11.60	-12.60	-12.30	-2.419
C305-LP081515	-11.50	-12.40	-12.30	-2.986
C305-LP081516	-11.30	-12.30	-12.10	-2.895
C305-LP081517	-12.50	-13.10	-13.00	-1.832
C305-LP081518	#N/A	#N/A	#N/A	-
C305-LP081519	-12.80	-13.20	-13.30	-2.015

	Registered movement (mm)			Rate (mm/year)
	12/08/2015	09/09/2015	02/11/2015	
C305-LP081520	-12.90	-13.20	-13.30	-1.630
C305-LP081521	-11.60	-12.20	-12.50	-3.736
	Rate less than -2.5mm/year		% less 2mm/ year	75%
	Rate greater than -3.5mm/year		% less 3mm/ year	88%

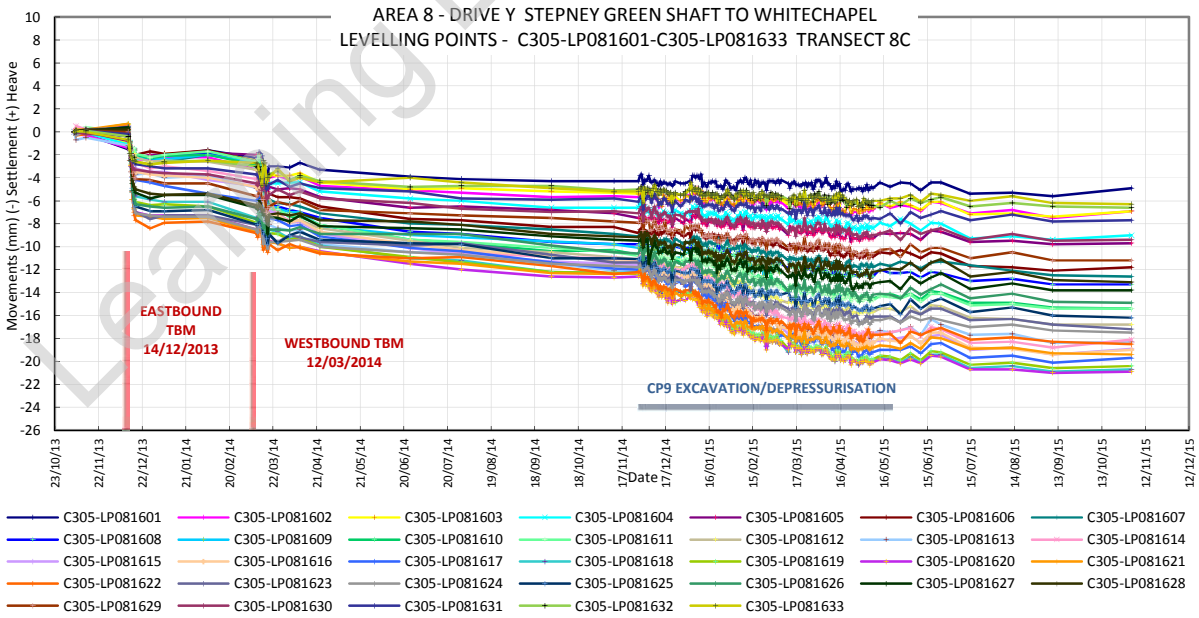
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of levelling points with a settlement rate less than 2mm/year is 75%, whereas 88% are less than 3mm/year.

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



C305-LP081601 - C305-LP081633 – TRANSECT 8C



The graph above shows a maximum settlement of -8.4mm after the eastbound TBM transit and a -12.3mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -21mm was recorded after CP9 works.

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

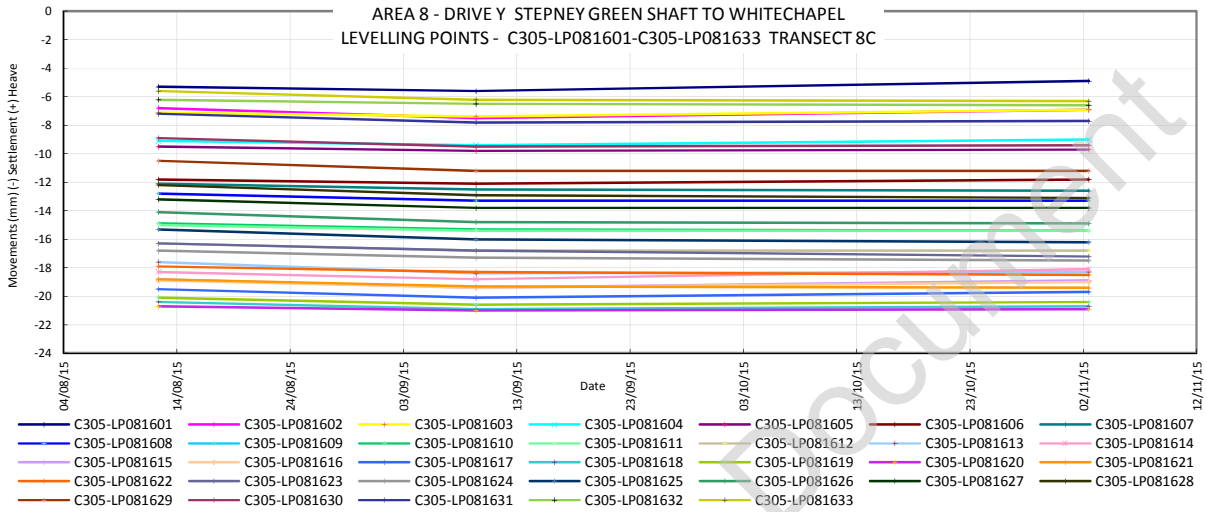
The table below shows the annual rate for the levelling points in this array.

	Registered movement (mm)			Rate (mm/year)
	12/08/2015	09/09/2015	02/11/2015	
C305-LP081601	-5.30	-5.60	-4.90	2.176
C305-LP081602	-6.80	-7.50	-6.90	0.162
C305-LP081603	-7.10	-7.40	-6.90	1.225
C305-LP081604	-9.10	-9.40	-9.00	0.749
C305-LP081605	-9.50	-9.80	-9.70	-0.678
C305-LP081606	-11.80	-12.10	-11.80	0.273
C305-LP081607	-12.10	-12.50	-12.60	-2.014
C305-LP081608	-12.80	-13.30	-13.30	-1.923
C305-LP081609	#N/A	#N/A	#N/A	-
C305-LP081610	-14.90	-15.30	-15.40	-2.014
C305-LP081611	-15.00	-15.40	-15.40	-1.538
C305-LP081612	-16.30	-16.80	-16.80	-1.923
C305-LP081613	-17.60	-18.40	-18.30	-2.601
C305-LP081614	-18.30	-18.80	-18.10	1.407
C305-LP081615	-18.80	-19.40	-18.90	0.071
C305-LP081616	-18.90	-19.40	-19.00	-0.020
C305-LP081617	-19.50	-20.10	-19.70	-0.405
C305-LP081618	-20.40	-20.90	-20.70	-0.971
C305-LP081619	-20.10	-20.60	-20.40	-0.971
C305-LP081620	-20.70	-21.00	-20.90	-0.678
C305-LP081621	-18.80	-19.30	-19.40	-2.398
C305-LP081622	-17.90	-18.30	-18.50	-2.490
C305-LP081623	-16.30	-16.80	-17.20	-3.826
C305-LP081624	-16.80	-17.30	-17.50	-2.874
C305-LP081625	-15.30	-16.00	-16.20	-3.643
C305-LP081626	-14.10	-14.80	-14.90	-3.168
C305-LP081627	-13.20	-13.80	-13.80	-2.307
C305-LP081628	-12.20	-12.90	-13.10	-3.643
C305-LP081629	-10.50	-11.20	-11.20	-2.692
C305-LP081630	-8.90	-9.50	-9.40	-1.832
C305-LP081631	-7.20	-7.80	-7.70	-1.832
C305-LP081632	-6.20	-6.50	-6.60	-1.629
C305-LP081633	-5.60	-6.20	-6.30	-2.783
	Rate less than -2.5mm/year		% less 2mm/ year	75%
	Rate greater than -3.5mm/year		% less 3mm/ year	91%

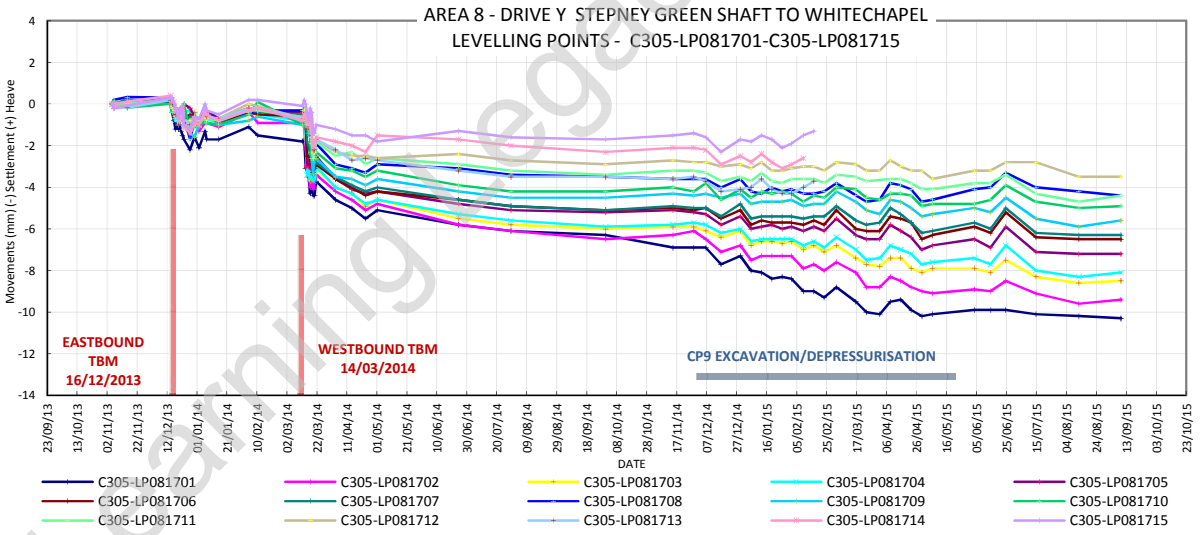
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of levelling points with a settlement rate less than 2mm/year is 75%, whereas 91% are less than 3mm/year.

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



C305-LP081701 - C305-LP081715



The graph above shows a maximum settlement of -2.2mm after the eastbound TBM transit and a -6.9mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -10.3mm was recorded after CP9 works.

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

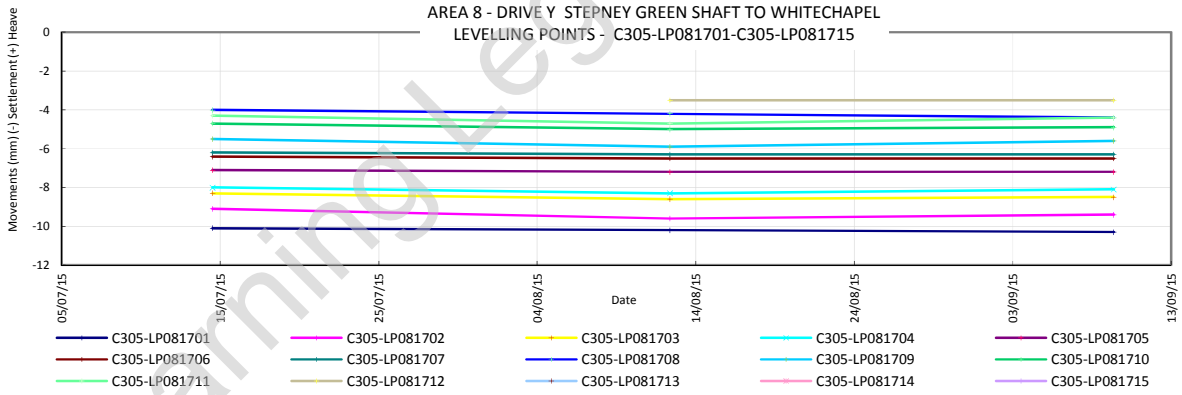
The table below shows the annual rate for the levelling points in this array.

	Registered movement (mm)			Rate (mm/year)
	14/07/2015	12/08/2015	09/09/2015	
C305-LP081701	-10.10	-10.20	-10.30	-1.284
C305-LP081702	-9.10	-9.60	-9.40	-1.948
C305-LP081703	-8.30	-8.60	-8.50	-1.297
C305-LP081704	-8.00	-8.30	-8.10	-0.658
C305-LP081705	-7.10	-7.20	-7.20	-0.645
C305-LP081706	-6.40	-6.50	-6.50	-0.645
C305-LP081707	-6.20	-6.30	-6.30	-0.645
C305-LP081708	-4.00	-4.20	-4.40	-2.568
C305-LP081709	-5.50	-5.90	-5.60	-0.664
C305-LP081710	-4.70	-5.00	-4.90	-1.297
C305-LP081711	-4.30	-4.70	-4.40	-0.664
C305-LP081712	#N/A	-3.50	-3.50	0.000
C305-LP081713	#N/A	#N/A	#N/A	-
C305-LP081714	#N/A	#N/A	#N/A	-
C305-LP081715	#N/A	#N/A	#N/A	-
	Rate less than -2.5mm/year		% less 2mm/ year	92%
	Rate greater than -		% less 3mm/ year	100%

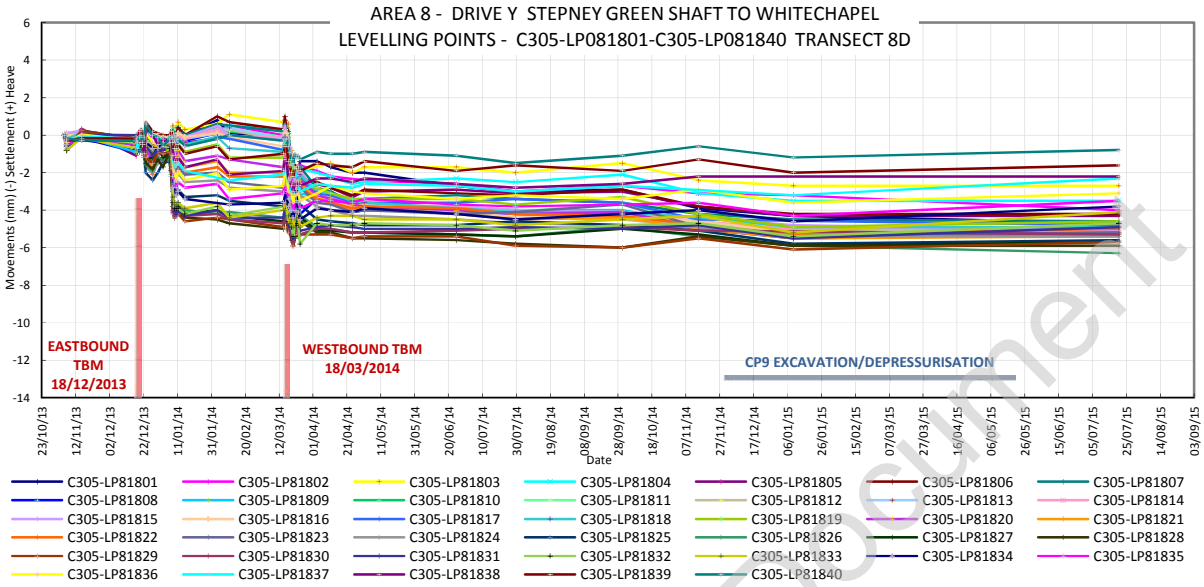
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of levelling points with a settlement rate less than 2mm/year is 92%, whereas 100% are less than 3mm/year.

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



C305-LP081801 - C305-LP081840 – TRANSECT 8D



The graph above shows a maximum settlement of -4.5mm after the eastbound TBM transit and a -6mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -6mm was recorded after CP9 works.

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

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

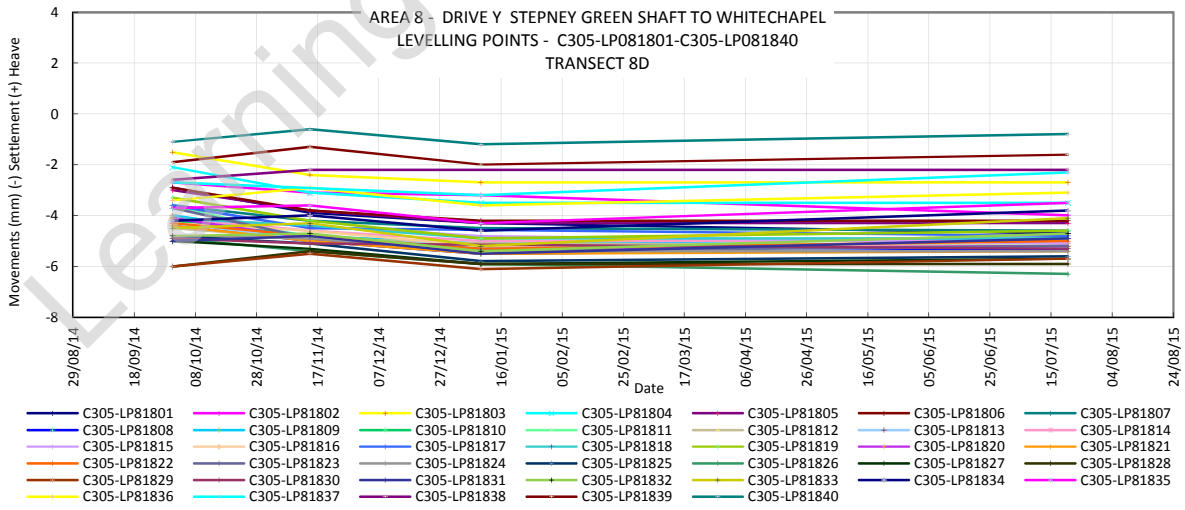
	Registered movement (mm)				Rate (mm/year)
	30/09/2014	14/11/2014	09/01/2015	20/07/2015	
C305-LP81801	-2.90	-3.90	-4.30	-4.70	-1.849
C305-LP81802	-2.70	-3.10	-3.20	-4.00	-1.521
C305-LP81803	-1.50	-2.40	-2.70	-2.70	-1.105
C305-LP81804	-2.10	-3.10	-3.50	-3.50	-1.313
C305-LP81805	-3.00	-3.80	-4.30	-4.30	-1.280
C305-LP81806	-2.90	-3.80	-4.20	-4.20	-1.233
C305-LP81807	-3.60	-4.20	-4.50	-4.60	-0.999
C305-LP81808	-4.40	-5.00	-5.50	-5.30	-0.852
C305-LP81809	-4.00	-4.80	-5.10	-4.90	-0.757
C305-LP81810	-4.20	-4.80	-5.30	-5.20	-0.986
C305-LP81811	-3.60	-4.90	-5.10	-5.20	-1.433
C305-LP81812	-4.50	-4.90	-5.10	-5.20	-0.710
C305-LP81813	-4.30	-4.90	-5.20	-5.20	-0.865
C305-LP81814	-4.10	-4.60	-5.00	-5.00	-0.912
C305-LP81815	-4.10	-4.40	-4.80	-5.10	-1.154
C305-LP81816	-4.30	-4.60	-5.20	-5.20	-1.007
C305-LP81817	-3.60	-4.50	#N/A	-4.80	-1.132
C305-LP81818	-4.10	-4.40	-4.90	-4.90	-0.879

	Registered movement (mm)				Rate (mm/year)
	30/09/2014	14/11/2014	09/01/2015	20/07/2015	
C305-LP81819	-3.30	-4.20	-4.90	-4.60	-1.214
C305-LP81820	-4.10	-4.90	-5.30	-5.20	-1.019
C305-LP81821	-4.40	-5.00	-5.50	-5.40	-0.986
C305-LP81822	-4.30	-4.80	-5.30	-5.00	-0.637
C305-LP81823	-3.70	-4.90	-5.40	-5.20	-1.333
C305-LP81824	-4.80	-4.90	-5.40	-5.40	-0.718
C305-LP81825	-4.80	-5.10	-5.80	-5.60	-0.866
C305-LP81826	-4.90	-5.40	-5.90	-6.30	-1.576
C305-LP81827	-5.00	-5.30	-5.90	-5.70	-0.739
C305-LP81828	-6.00	-5.40	-5.90	-5.90	-0.157
C305-LP81829	-6.00	-5.50	-6.10	-5.70	0.172
C305-LP81830	-4.90	-5.10	#N/A	-5.30	-0.438
C305-LP81831	-5.00	-4.80	-5.50	-4.90	0.071
C305-LP81832	-4.80	-4.70	-5.40	-4.70	0.125
C305-LP81833	-4.50	-4.30	-5.20	-4.10	0.486
C305-LP81834	-4.20	-4.00	-4.60	-3.80	0.467
C305-LP81835	-3.70	-3.60	-4.30	-3.50	0.259
C305-LP81836	-3.40	-2.90	-3.60	-3.10	0.178
C305-LP81837	-2.70	#N/A	-3.20	-2.30	0.657
C305-LP81838	-2.60	-2.20	#N/A	-2.20	0.329
C305-LP81839	-1.90	-1.30	-2.00	-1.60	0.124
C305-LP81840	-1.10	-0.60	-1.20	-0.80	0.172
	Rate less than -2.5mm/year			% less 2mm/ year	100%
	Rate greater than -3.5mm/year			% less 3mm/ year	100%

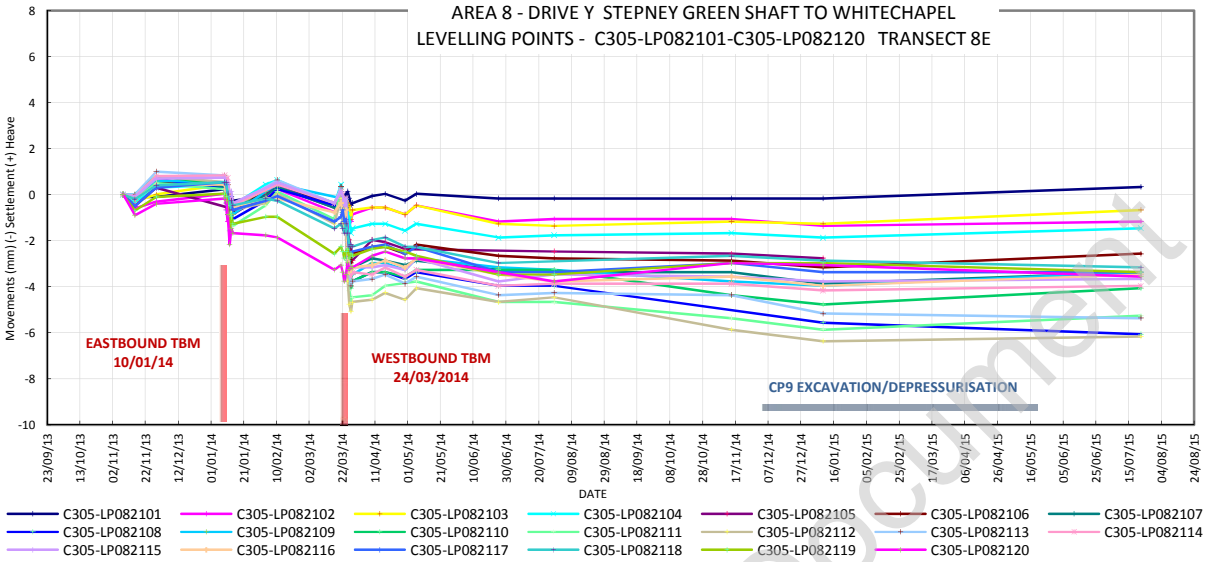
Note: All the movements are in mm. (-) Settlement / (+) Heave

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

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



C305-LP082101 - C305-LP082120 – TRANSECT 8E



The graph above shows a maximum settlement of -3.2mm after the eastbound TBM transit and –a 5.8mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -6.3mm was recorded after CP9 works.

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

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

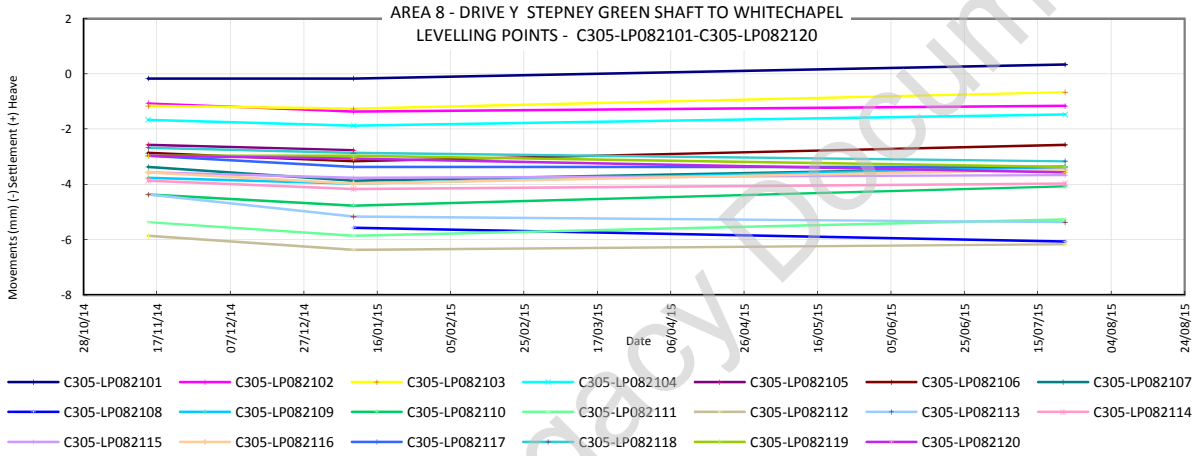
	Registered movement (mm)			Rate (mm/year)
	14/11/2014	09/01/2015	22/07/2015	
C305-LP082101	-0.17	-0.17	0.33	0.785
C305-LP082102	-1.07	-1.37	-1.17	-0.011
C305-LP082103	-1.17	-1.27	-0.67	0.834
C305-LP082104	-1.67	-1.87	-1.47	0.412
C305-LP082105	-2.57	-2.77	#N/A	-
C305-LP082106	-2.87	-3.17	-2.57	0.617
C305-LP082107	-3.37	-3.87	-3.37	0.244
C305-LP082108	#N/A	-5.57	-6.07	-
C305-LP082109	-3.77	-3.97	-3.37	0.725
C305-LP082110	-4.37	-4.77	-4.07	0.666
C305-LP082111	-5.37	-5.87	-5.27	0.401
C305-LP082112	-5.87	-6.37	-6.17	-0.227
C305-LP082113	-4.37	-5.17	-5.37	-1.180
C305-LP082114	-3.87	-4.17	-3.97	-0.011
C305-LP082115	-3.57	-3.77	-3.67	-0.059
C305-LP082116	-3.57	-3.97	-3.47	0.352
C305-LP082117	-2.97	-3.37	-3.37	-0.433
C305-LP082118	-2.67	-2.87	-3.17	-0.687

	Registered movement (mm)			Rate (mm/year)
	14/11/2014	09/01/2015	22/07/2015	
C305-LP082119	-2.97	-2.97	-3.37	-0.628
C305-LP082120	-2.97	-3.07	-3.57	-0.893
	Rate less than -2.5mm/year		% less 2mm/ year	100%
	Rate greater than -3.5mm/year		% less 3mm/ year	100%

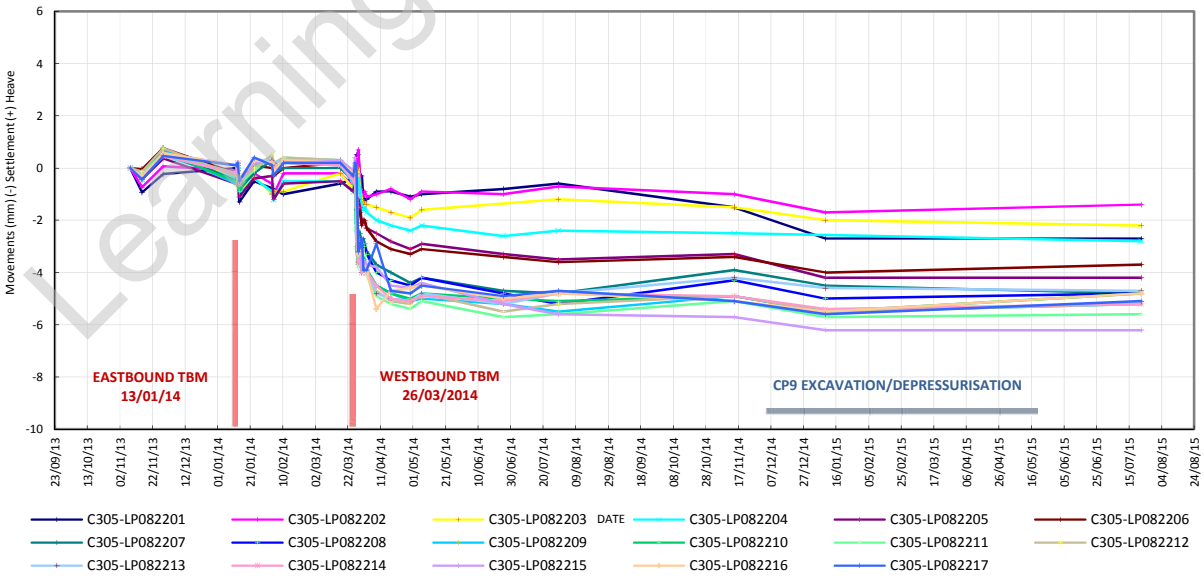
Note: All the movements are in mm. (-) Settlement / (+) Heave

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

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



C305-LP082201 - C305-LP08217 – TRANSECT 8F



The graph above shows a maximum settlement of -1.3mm after the eastbound TBM transit and a -5.7mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -6.2mm was recorded after CP9 works.

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

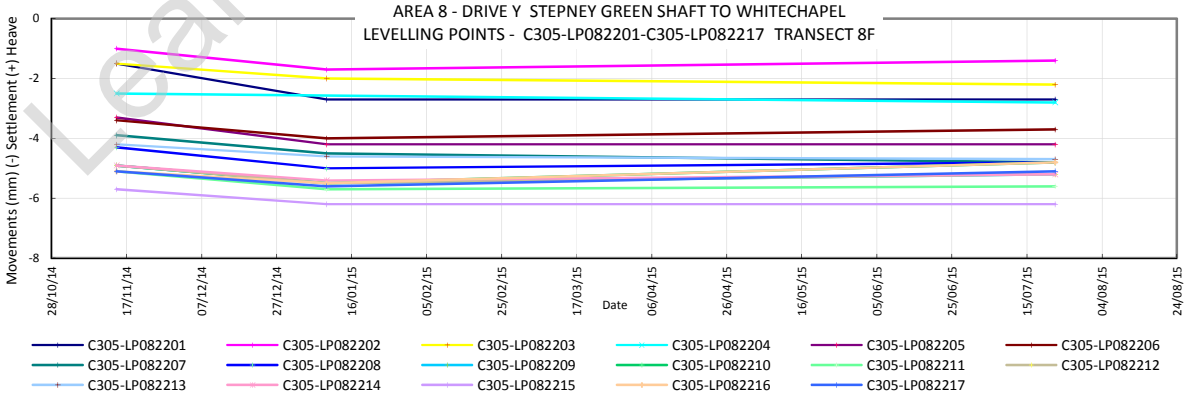
The table below shows the annual rate for the levelling points in this array.

	Registered movement (mm)			Rate (mm/year)
	14/11/2014	09/01/2015	22/07/2015	
C305-LP082201	-1.50	-2.70	-2.70	-1.297
C305-LP082202	-1.00	-1.70	-1.40	-0.286
C305-LP082203	-1.50	-2.00	-2.20	-0.854
C305-LP082204	-2.50	#N/A	-2.80	-0.438
C305-LP082205	-3.30	-4.20	-4.20	-0.973
C305-LP082206	-3.40	-4.00	-3.70	-0.178
C305-LP082207	-3.90	-4.50	-4.80	-1.119
C305-LP082208	-4.30	-5.00	-4.80	-0.443
C305-LP082209	-4.90	-5.50	-5.20	-0.178
C305-LP082210	-4.90	-5.50	-4.80	0.449
C305-LP082211	-5.10	-5.70	-5.60	-0.492
C305-LP082212	-4.90	-5.50	-5.20	-0.178
C305-LP082213	-4.20	-4.60	-4.70	-0.589
C305-LP082214	-4.90	-5.40	-5.20	-0.227
C305-LP082215	-5.70	-6.20	-6.20	-0.540
C305-LP082216	-5.10	-5.50	-4.80	0.666
C305-LP082217	-5.10	-5.60	-5.10	0.244
	Rate less than -2.5mm/year		% less 2mm/ year	100%
	Rate greater than -3.5mm/year		% less 3mm/ year	100%

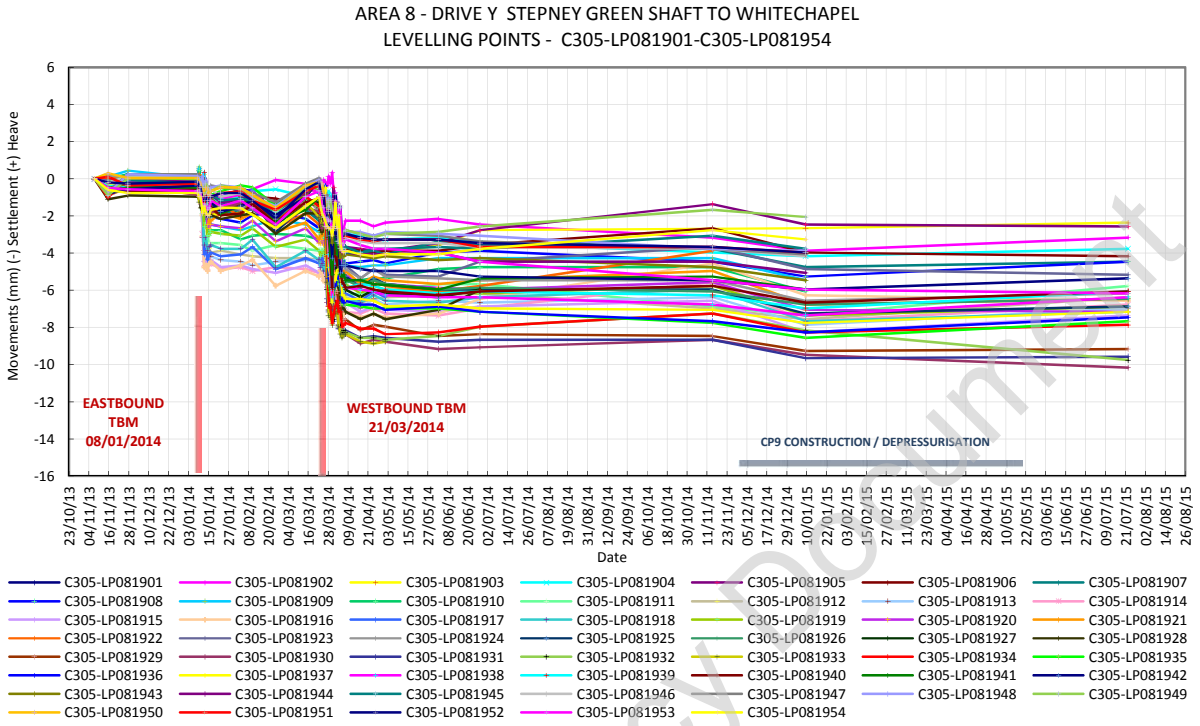
Note: All the movements are in mm. (-) Settlement / (+) Heave

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

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



C305-LP081901 - C305-LP081954



The graph above shows a maximum settlement of -5.8mm after the eastbound TBM transit and a -9.2mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -10.2mm was recorded after CP9 works.

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

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

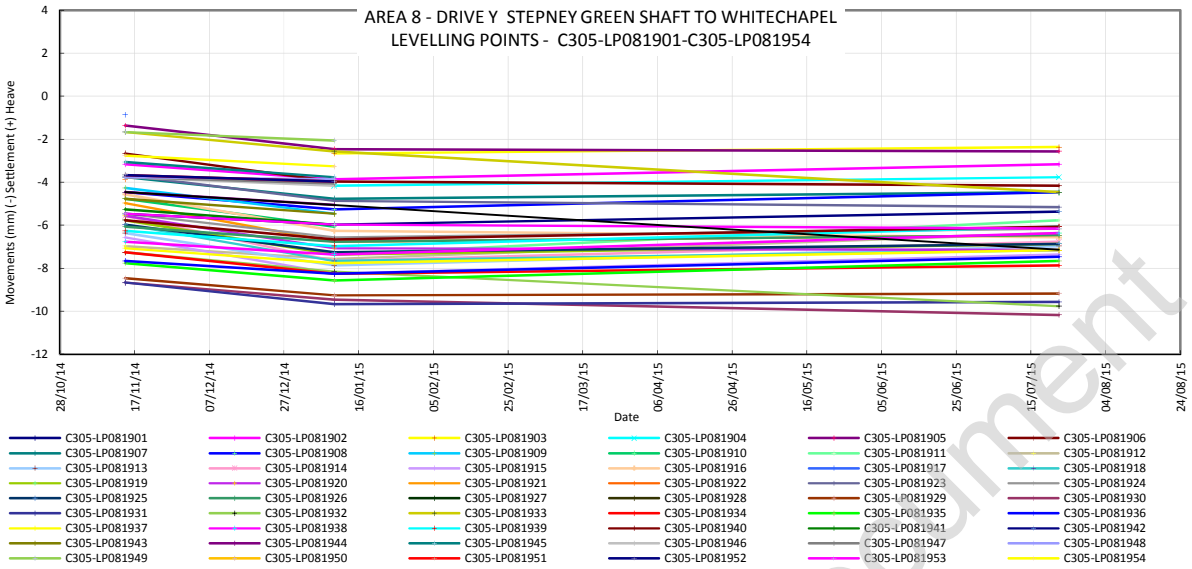
	Registered movement (mm)			Rate (mm/year)
	14/11/2014	09/01/2015	22/07/2015	
C305-LP081901	#N/A	#N/A	#N/A	-
C305-LP081902	-3.17	-3.87	-3.17	0.342
C305-LP081903	#N/A	-2.67	-2.37	0.564
C305-LP081904	#N/A	-4.17	-3.77	0.752
C305-LP081905	-1.37	-2.47	-2.57	-1.346
C305-LP081906	-2.67	-3.97	-4.17	-1.719
C305-LP081907	-3.77	-4.77	-4.47	-0.610
C305-LP081908	-4.47	-5.27	-4.47	0.390
C305-LP081909	-4.27	-5.47	#N/A	-7.826
C305-LP081910	-4.77	-6.07	#N/A	-8.478
C305-LP081911	#N/A	-7.37	-5.77	3.010
C305-LP081912	-6.97	-7.57	-6.37	1.234
C305-LP081913	-6.37	-7.87	-6.97	-0.210
C305-LP081914	-5.57	-7.67	-6.77	-0.858

	Registered movement (mm)			Rate (mm/year)
	14/11/2014	09/01/2015	22/07/2015	
C305-LP081915	-6.57	-8.27	-7.37	-0.426
C305-LP081916	-4.57	-6.27	-6.57	-2.309
C305-LP081917	-0.87	#N/A	#N/A	-
C305-LP081918	-5.97	-7.67	-7.17	-1.053
C305-LP081919	-5.77	-7.37	-6.87	-0.945
C305-LP081920	-5.57	-7.07	-7.17	-1.779
C305-LP081921	-4.97	-6.77	-6.47	-1.475
C305-LP081922	-3.87	#N/A	#N/A	-
C305-LP081923	-3.67	-4.87	-5.17	-1.768
C305-LP081924	-5.47	-6.57	-6.17	-0.562
C305-LP081925	-5.97	-7.27	-6.87	-0.778
C305-LP081926	-6.07	-6.77	-6.47	-0.286
C305-LP081927	#N/A	#N/A	#N/A	-
C305-LP081928	#N/A	#N/A	#N/A	-
C305-LP081929	-8.47	-9.27	-9.17	-0.708
C305-LP081930	-8.67	-9.47	-10.17	-1.963
C305-LP081931	-8.67	-9.67	-9.57	-0.924
C305-LP081932	-7.27	-8.17	-9.77	-3.484
C305-LP081933	-1.67	-2.57	-4.47	-3.954
C305-LP081934	-7.27	-8.27	-7.87	-0.454
C305-LP081935	-7.77	-8.57	-7.67	0.547
C305-LP081936	-7.67	-8.27	-7.47	0.607
C305-LP081937	-7.07	-7.77	-7.17	0.185
C305-LP081938	-6.77	-7.37	-6.37	0.920
C305-LP081939	-6.27	-6.97	-6.07	0.655
C305-LP081940	-5.77	-6.67	-6.07	-0.032
C305-LP081941	-5.27	-5.97	#N/A	-
C305-LP081942	-5.47	-5.97	-5.37	0.401
C305-LP081943	-4.77	-5.47	#N/A	-4.565
C305-LP081944	-4.47	-5.07	#N/A	-3.913
C305-LP081945	-3.07	-3.77	#N/A	-4.565
C305-LP081946	-3.77	-4.17	#N/A	-2.609
C305-LP081947	-3.77	-4.07	#N/A	-1.956
C305-LP081948	-3.77	-3.87	#N/A	-0.652
C305-LP081949	-1.67	-2.07	#N/A	-2.609
C305-LP081950	#N/A	#N/A	#N/A	-
C305-LP081951	-3.67	-3.97	#N/A	-1.956
C305-LP081952	-3.67	-3.97	#N/A	-1.956
C305-LP081953	-5.47	-5.97	-6.17	-0.854
C305-LP081954	-2.77	-3.27	#N/A	-3.261
	Rate less than -2.5mm/year		% less 2mm/ year	79%
	Rate greater than -		% less 3mm/ year	87%

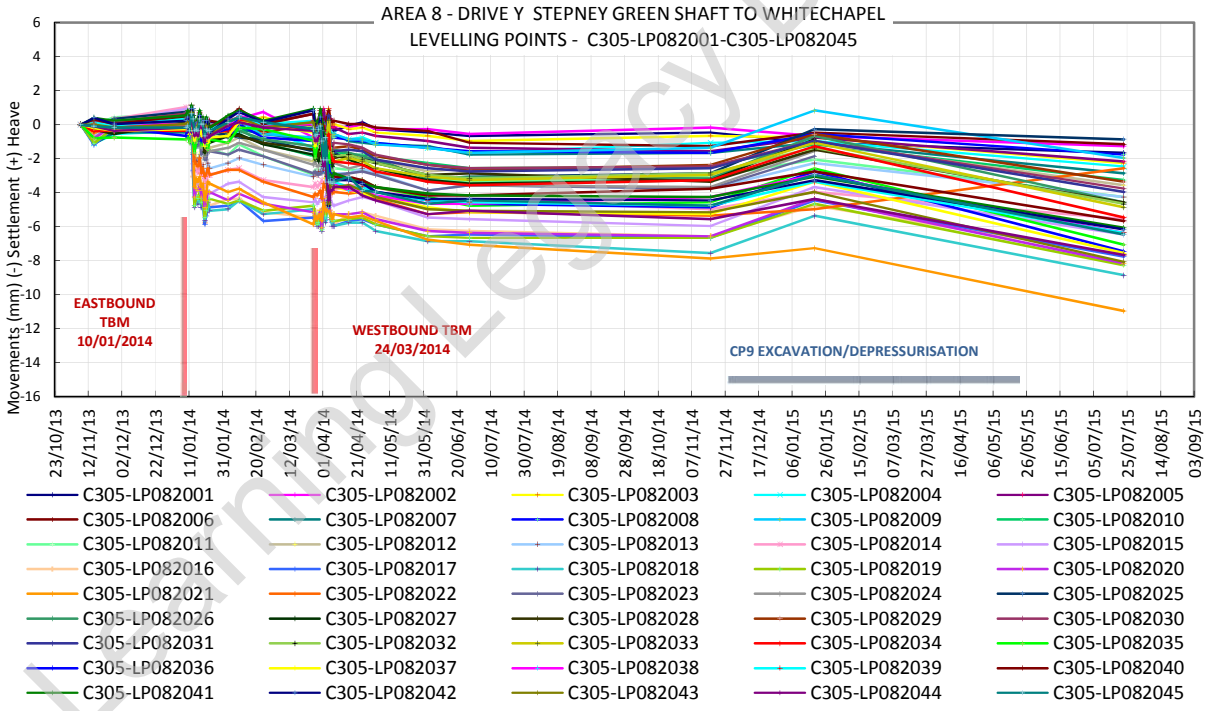
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of levelling points with a settlement rate less than 2mm/year is 79%, whereas 87% are less than 3mm/year.

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



C305-LP082001 - C305-LP082045



The graph above shows a maximum settlement of -5.5mm after the eastbound TBM transit and a -7.9mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -11mm was recorded after CP9 works.

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

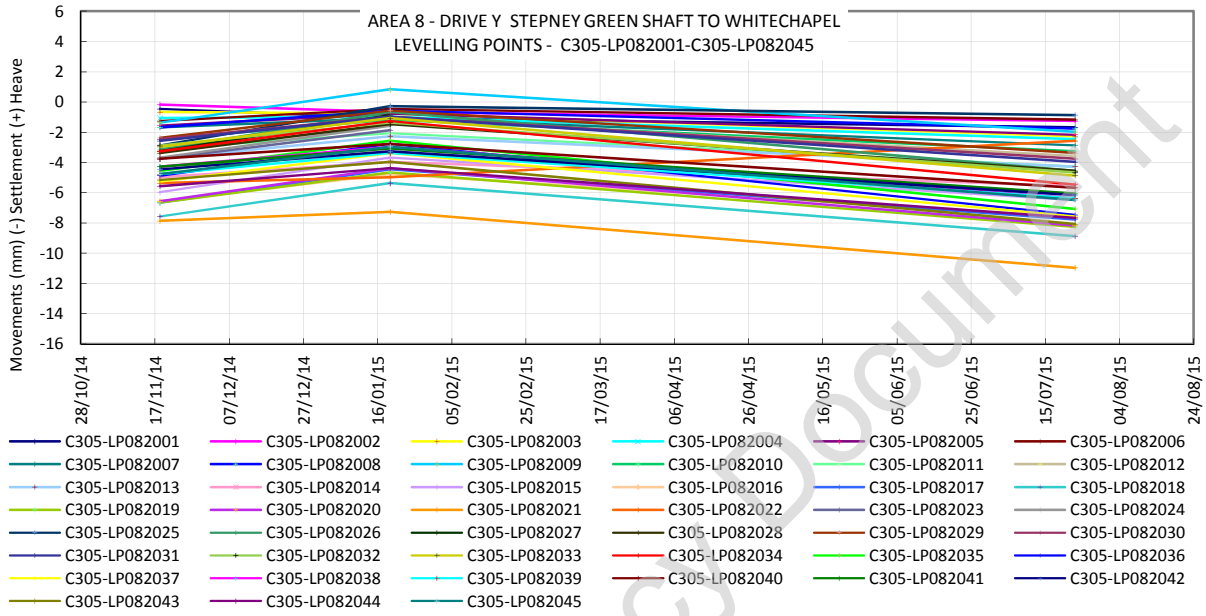
The table below shows the annual rate for the levelling points in this array.

	Registered movement (mm)			Rate (mm/year)
	18/11/2014	19/01/2015	23/07/2015	
C305-LP082001	-0.47	-1.07	-1.67	-1.641
C305-LP082002	-0.17	-0.67	-1.27	-1.527
C305-LP082003	-0.67	-0.77	-2.27	-2.505
C305-LP082004	-1.07	-0.97	-2.47	-2.277
C305-LP082005	-1.57	-0.77	-2.17	-1.319
C305-LP082006	-1.27	-0.47	-1.17	-0.203
C305-LP082007	-1.67	-1.07	-2.87	-2.185
C305-LP082008	-1.67	-0.57	-1.77	-0.658
C305-LP082009	-1.37	0.83	-1.97	-1.953
C305-LP082010	-2.47	-1.17	-3.27	-1.864
C305-LP082011	-3.07	-2.07	-4.27	-2.366
C305-LP082012	-2.47	-1.07	-3.57	-2.388
C305-LP082013	-3.77	-2.27	-4.27	-1.477
C305-LP082014	-4.97	-3.97	-5.57	-1.410
C305-LP082015	-5.97	-3.67	-6.47	-1.839
C305-LP082016	-6.57	-4.77	-7.67	-2.569
C305-LP082017	-6.67	-4.47	-7.77	-2.750
C305-LP082018	-7.57	-5.37	-8.87	-3.069
C305-LP082019	-6.67	-4.67	-8.27	-3.457
C305-LP082020	-6.57	-4.37	-8.17	-3.547
C305-LP082021	-7.87	-7.27	-10.97	-5.213
C305-LP082022	-5.37	-4.97	-2.57	4.282
C305-LP082023	-3.77	-1.87	#N/A	-
C305-LP082024	-3.67	-1.57	#N/A	-
C305-LP082025	-2.87	-0.27	-0.87	2.010
C305-LP082026	-3.17	-0.67	-4.57	-3.365
C305-LP082027	-3.27	-0.87	#N/A	-
C305-LP082028	-3.37	-1.47	-4.57	-2.774
C305-LP082029	-2.37	-0.57	-3.37	-2.410
C305-LP082030	-2.47	-0.97	-3.77	-2.752
C305-LP082031	-2.57	-0.97	-3.97	-2.957
C305-LP082032	-2.87	-1.37	-4.67	-3.549
C305-LP082033	-2.97	-1.07	-4.87	-3.890
C305-LP082034	-3.27	-1.27	-5.47	-4.413
C305-LP082035	-4.57	-2.57	-7.07	-4.891
C305-LP082036	-4.87	-2.77	-7.47	-5.096
C305-LP082037	-5.27	-3.37	-7.57	-4.527
C305-LP082038	-4.27	-2.97	-6.37	-3.937
C305-LP082039	-4.77	-3.37	-6.37	-3.185
C305-LP082040	-3.77	-2.77	-5.67	-3.482
C305-LP082041	-4.27	-3.07	-6.07	-3.413
C305-LP082042	-4.47	-3.27	-6.17	-3.254
C305-LP082043	-5.17	-3.97	-8.07	-5.166
C305-LP082044	-5.57	-4.37	-7.67	-3.891
C305-LP082045	-4.77	-2.97	-6.47	-3.526
	Rate less than -2.5mm/year		% less 2mm/ year	40%
	Rate greater than -3.5mm/year		% less 3mm/ year	71%

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

The percentage of levelling points with a settlement rate less than 2mm/year is 40%, whereas 71% are less than 3mm/year.

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

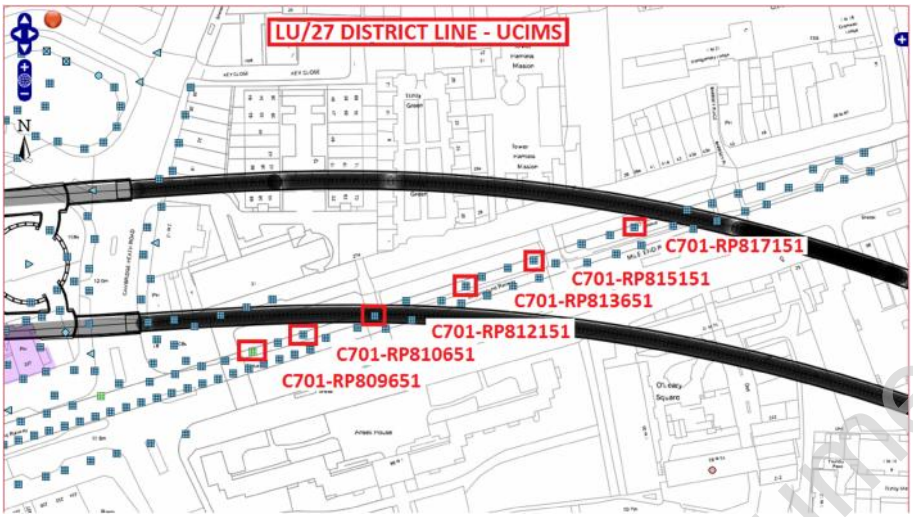


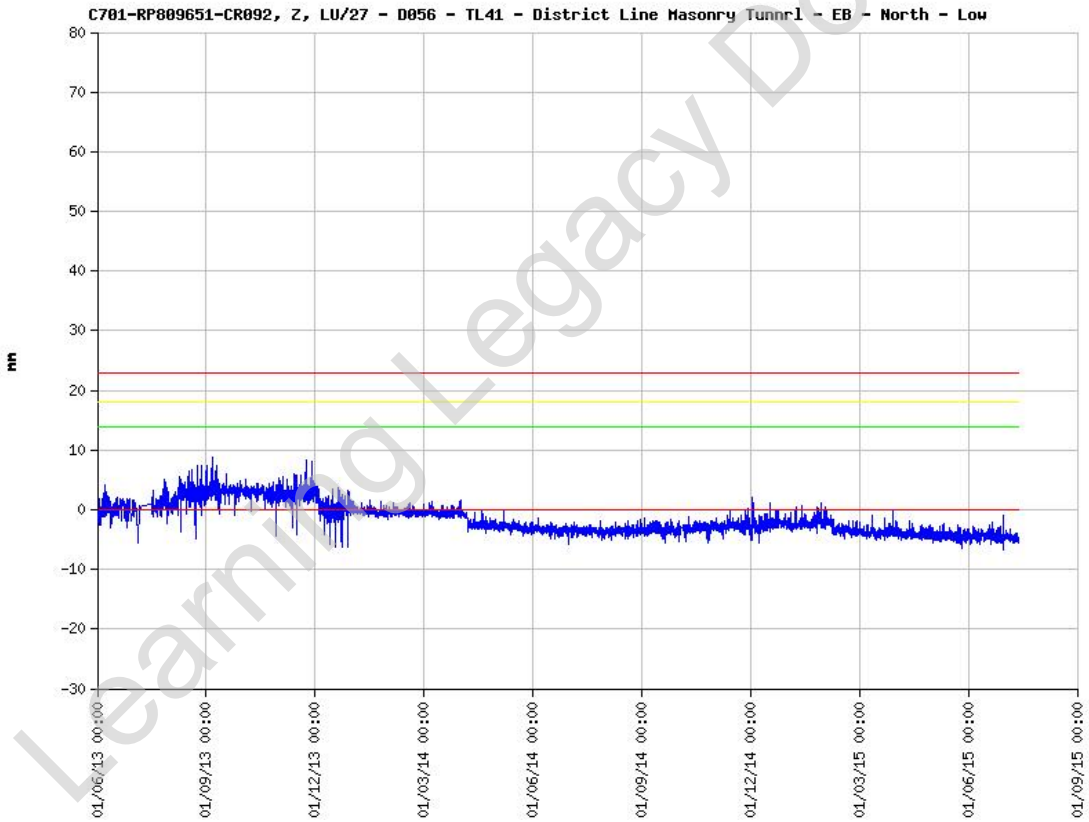
The last two sections have along the District Line in Mile End Road present different percentages:

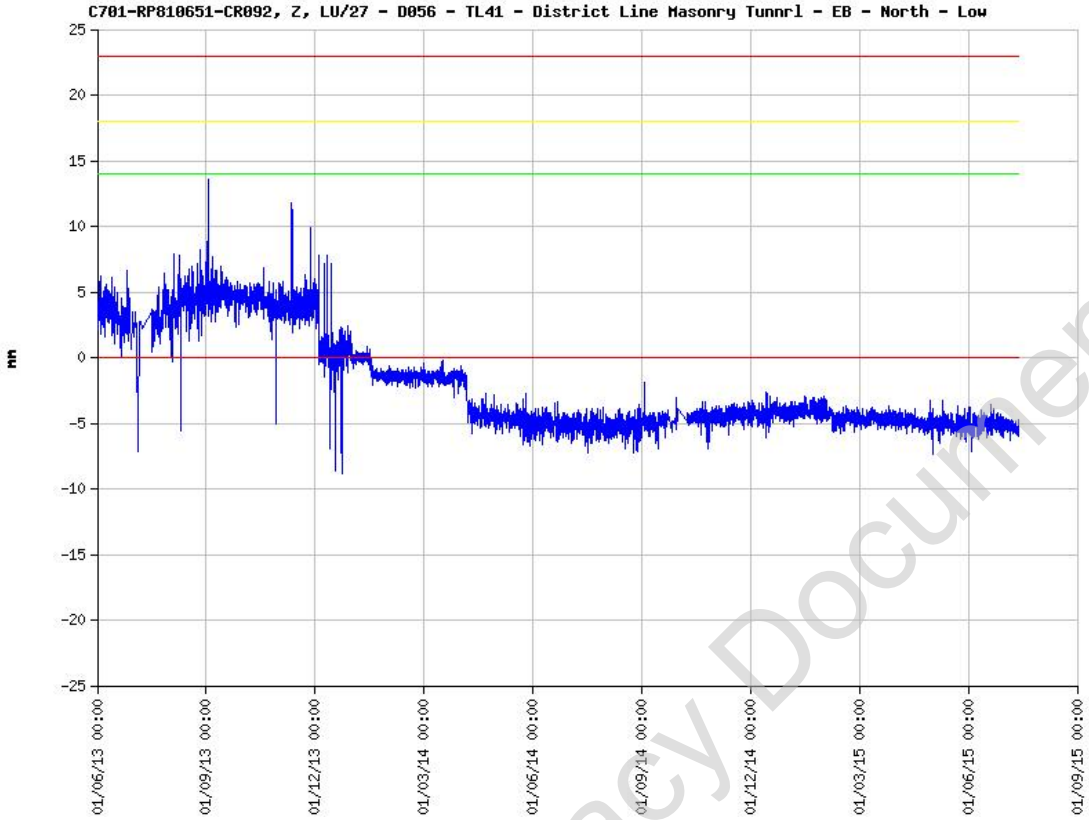
- C305-LP081901 - C305-LP081954: 79% less than 2mm/year and 87% less than 3mm/year
- C305-LP082001- C305-LP082045: 40% less than 2mm/year and 71% less than 3mm/year

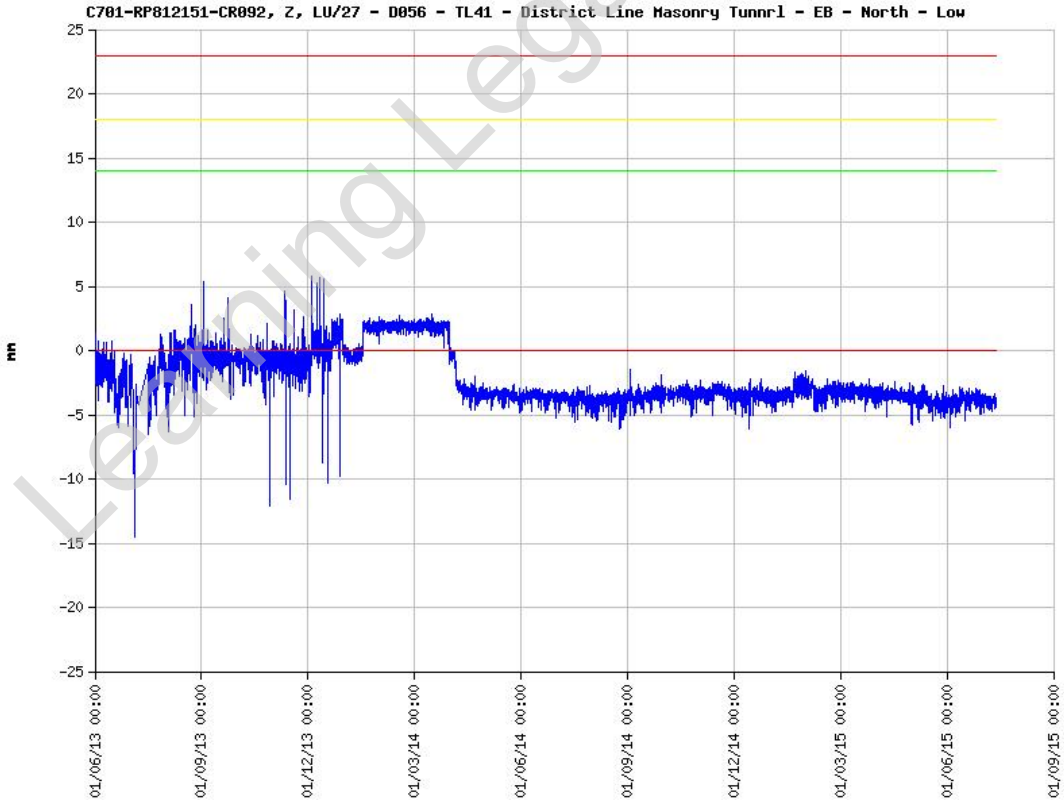
To justify the stability of the settlement in this area, some C701 monitoring points from the UCIMS have been included. The last five months readings show an acceptable low rate in accordance with the specification.

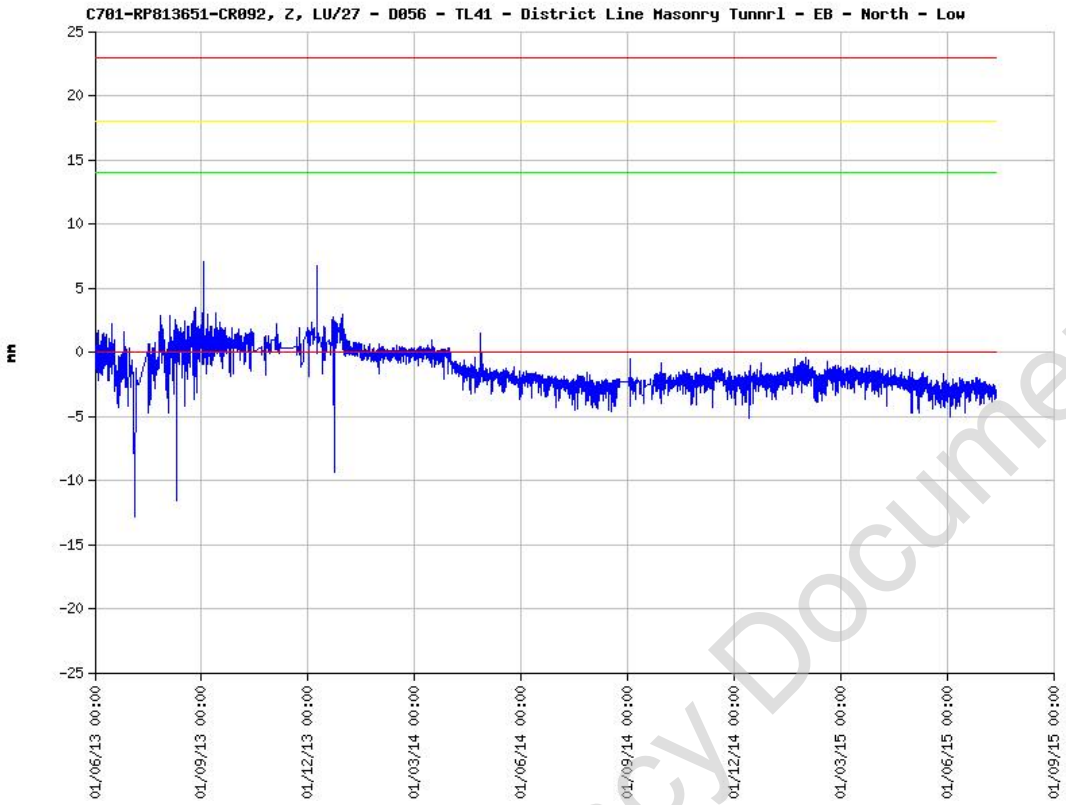
The location plan below shows the distribution of the C701 prisms from which monitoring data graphs are included:

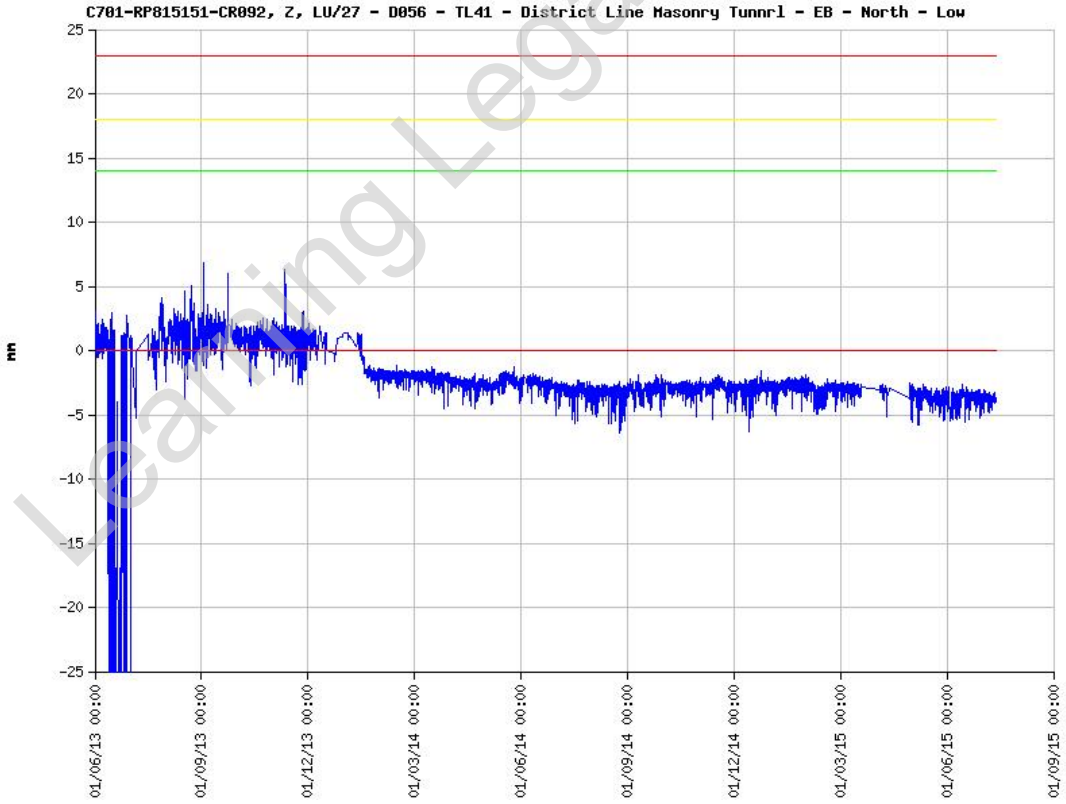


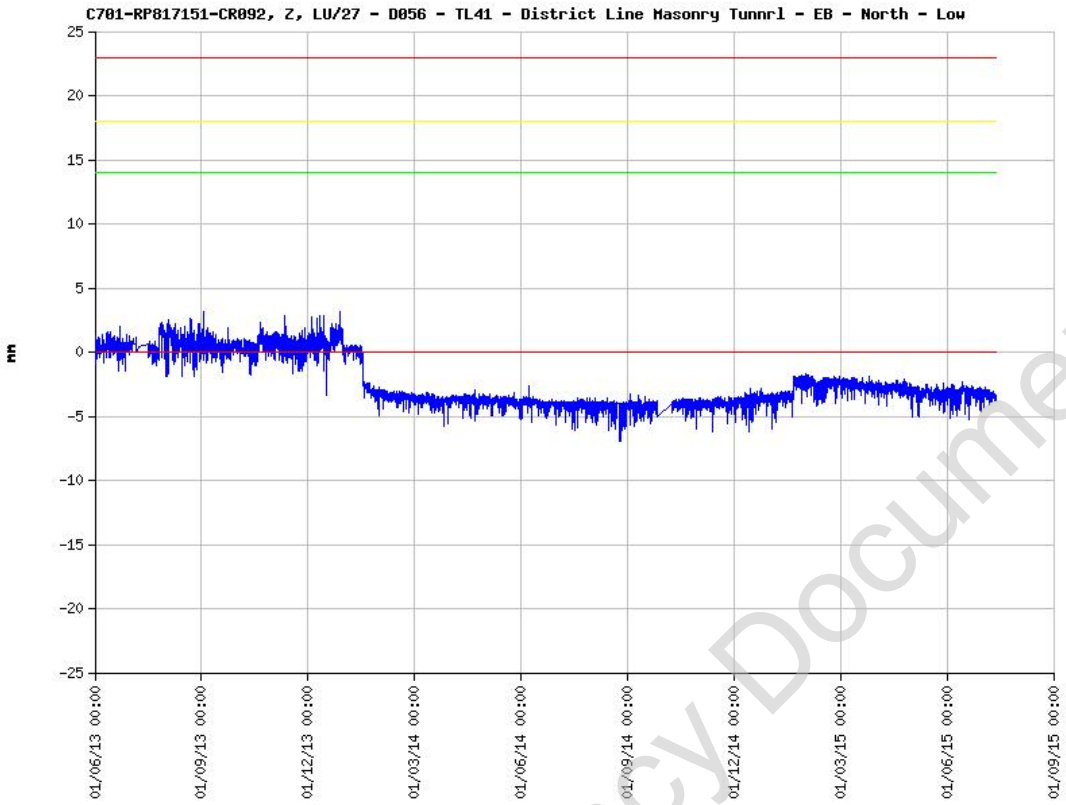




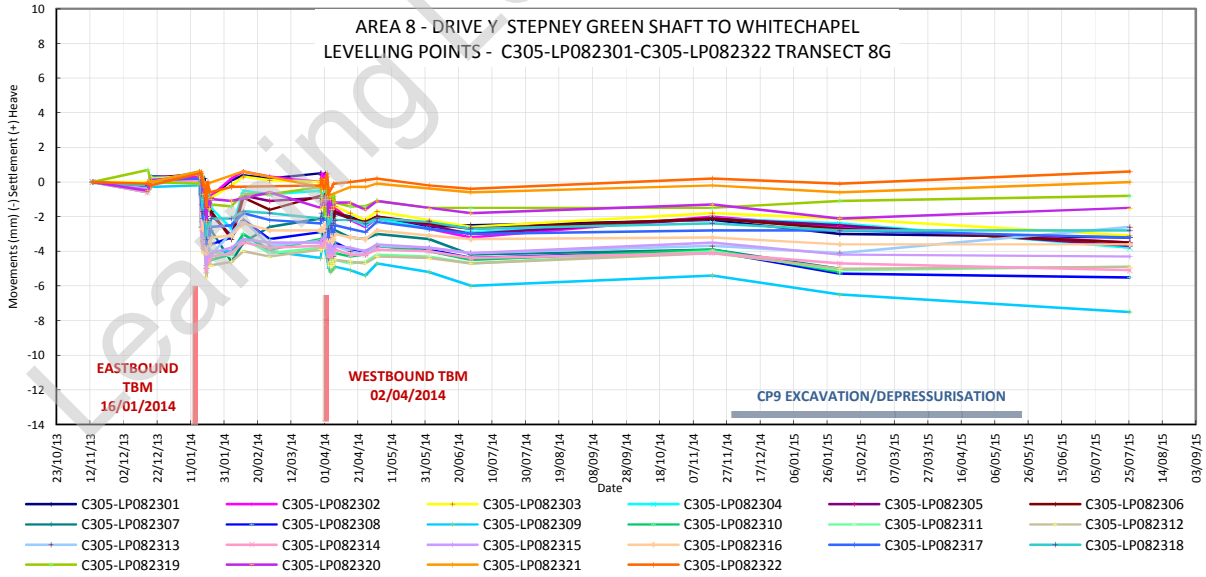








C305-LP082301 - C305-LP082322 TRANSECT 8G



The graph above shows a maximum settlement of -5.1mm after the eastbound TBM transit and a -6mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -7.5mm was recorded after CP9 works.

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

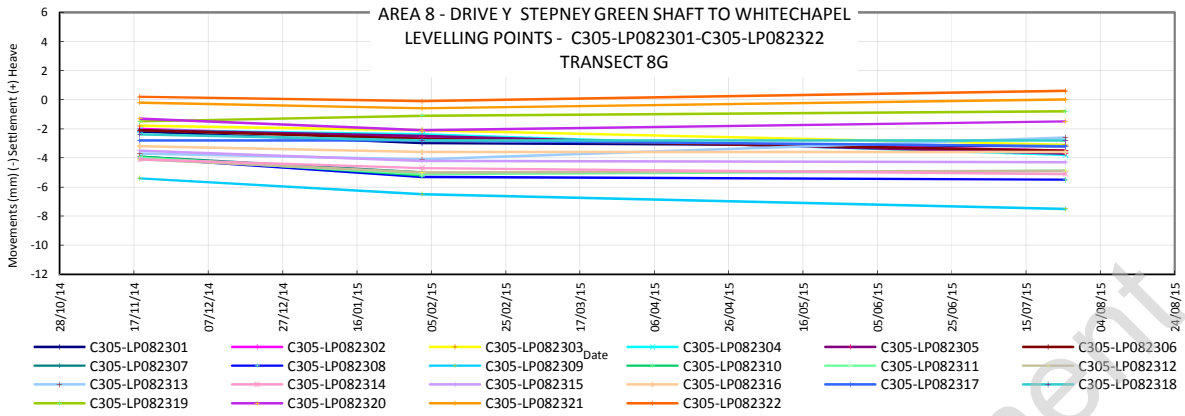
The table below shows the annual rate for the levelling points in this array.

	Registered movement (mm)			Rate (mm/year)
	18/11/2014	02/02/2015	25/07/2015	
C305-LP082301	-2.20	-3.00	-3.20	-1.286
C305-LP082302	-2.00	-2.60	-3.50	-2.146
C305-LP082303	-1.80	-2.10	-3.10	-1.940
C305-LP082304	-2.10	-2.40	-3.80	-2.570
C305-LP082305	-2.10	-2.50	-3.70	-2.377
C305-LP082306	-2.10	-2.70	-3.50	-1.989
C305-LP082307	-3.90	-5.00	#N/A	-
C305-LP082308	-4.00	-5.30	-5.50	-1.893
C305-LP082309	-5.40	-6.50	-7.50	-2.911
C305-LP082310	-3.90	-5.20	#N/A	-
C305-LP082311	-4.00	-5.10	-4.90	-1.020
C305-LP082312	-4.10	-5.00	-4.90	-0.935
C305-LP082313	-3.70	-4.10	-2.60	1.879
C305-LP082314	-4.10	-4.70	-5.10	-1.359
C305-LP082315	-3.50	-4.20	-4.30	-1.007
C305-LP082316	-3.20	-3.60	-3.60	-0.485
C305-LP082317	-2.80	-2.80	-3.20	-0.630
C305-LP082318	-2.40	-2.80	-2.80	-0.485
C305-LP082319	-1.50	-1.10	-0.80	0.958
C305-LP082320	-1.30	-2.10	-1.50	-0.025
C305-LP082321	-0.20	-0.60	0.00	0.460
C305-LP082322	0.20	-0.10	0.60	0.739
	Rate less than -2.5mm/year		% less 2mm/ year	90%
	Rate greater than -3.5mm/year		% less 3mm/ year	100%

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

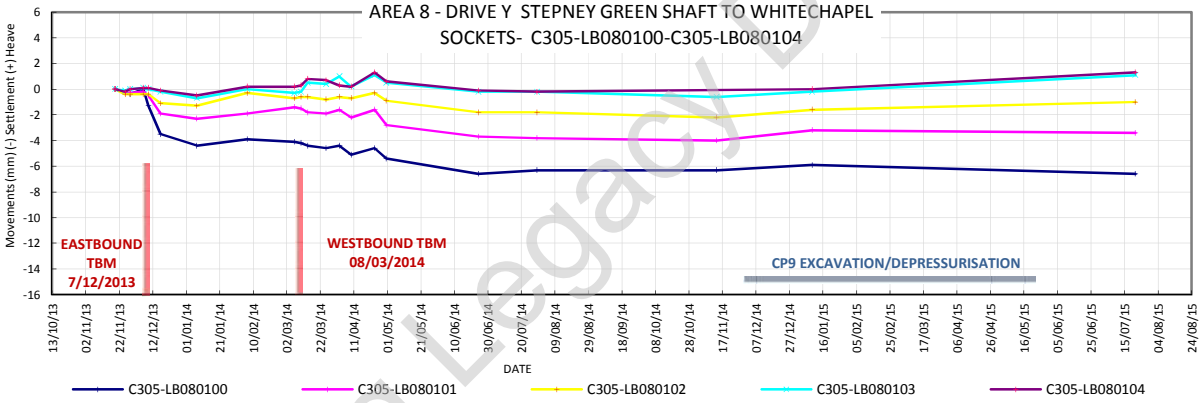
The percentage of levelling points with a settlement rate less than 2mm/year is 90%, whereas 100% are less than 3mm/year.

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



SOCKETS

C305-LB080100 - C305-LB080104



The graph above shows a maximum settlement of -4.4mm after the eastbound TBM transit and a -6.6mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -6.6mm was recorded after CP9 works.

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

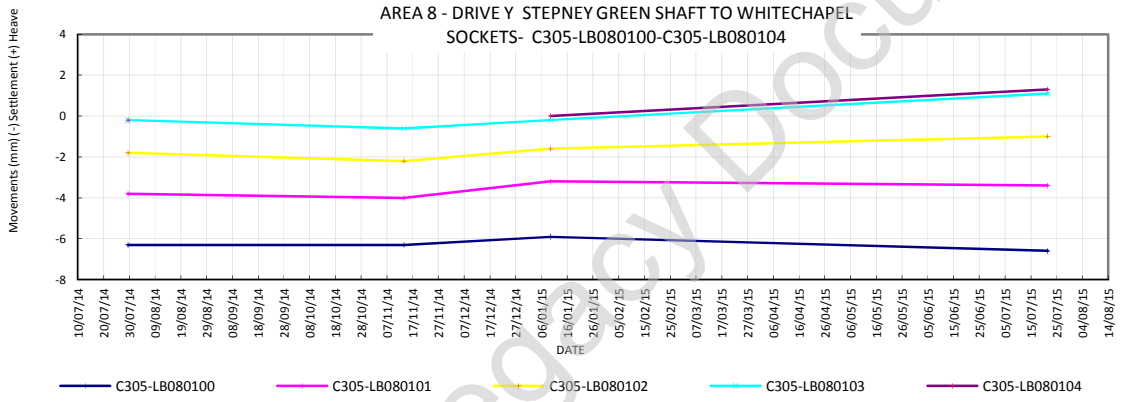
The table below shows the annual rate for the sockets in this array.

	Registered movement (mm)				Rate (mm/year)
	29/07/2014	13/11/2014	09/01/2015	21/07/2015	
C305-LB080100	-6.30	-6.30	-5.90	-6.60	-0.311
C305-LB080101	-3.80	-4.00	-3.20	-3.40	0.512
C305-LB080102	-1.80	-2.20	-1.60	-1.00	0.985
C305-LB080103	-0.20	-0.60	-0.20	1.10	1.520
C305-LB080104	-0.20	#N/A	0.00	1.30	1.560
	Rate less than -2.5mm/year			% less 2mm/ year	100%
	Rate greater than -3.5mm/year			% less 3mm/ year	100%

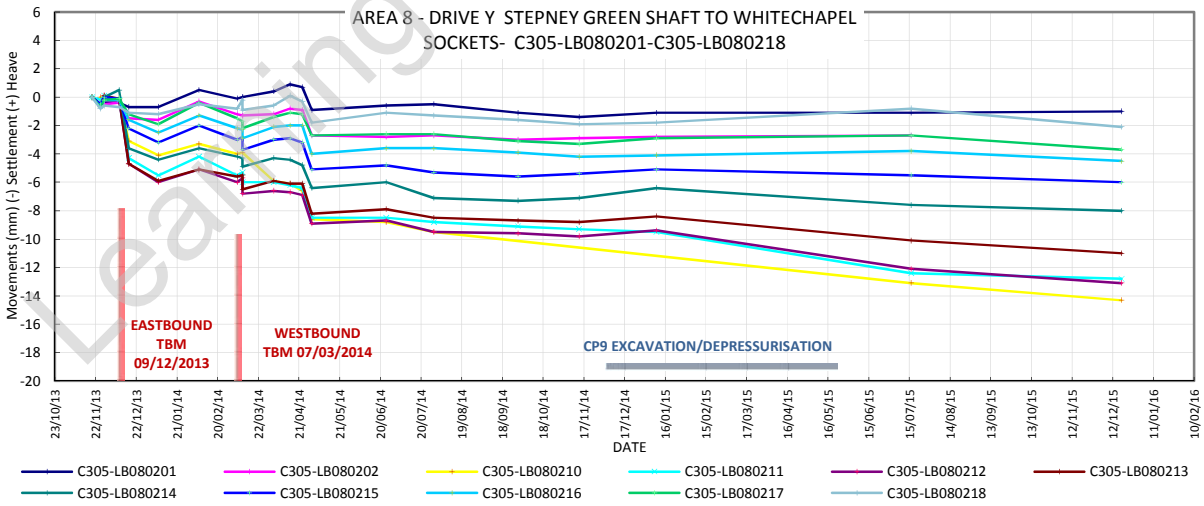
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of the sockets with a settlement rate less than 2mm/year is 100%.

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



C305-LB080201 - C305-LB080218



The graph above shows a maximum settlement of -5.9mm after the eastbound TBM transit and a -9.8mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -12mm was recorded after CP9 works.

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

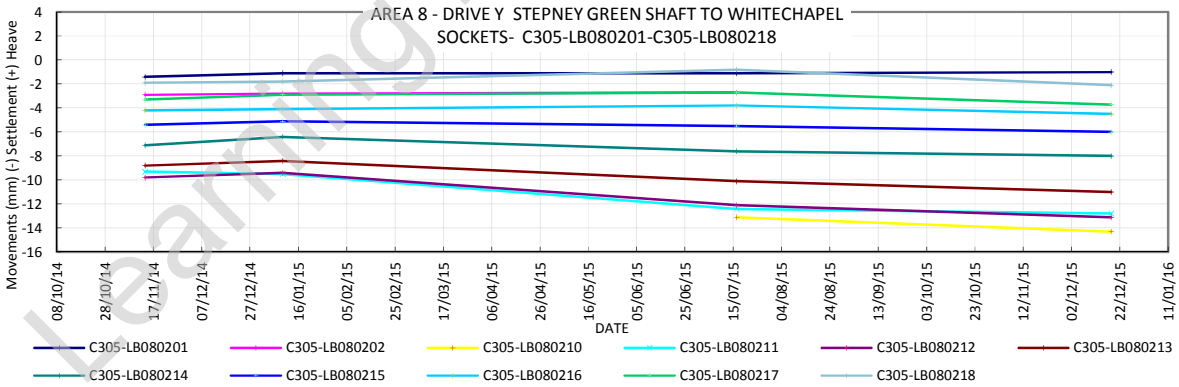
The table below shows the annual rate for the sockets in this array.

	Registered movement (mm)				Rate (mm/year)
	13/11/2014	09/01/2015	16/07/2015	18/12/2015	
C305-LB080201	-1.40	-1.10	-1.10	-1.00	0.274
C305-LB080202	-2.90	-2.80	-2.70	#N/A	0.256
C305-LB080210	#N/A	#N/A	-13.10	-14.30	-2.811
C305-LB080211	-9.30	-9.50	-12.40	-12.80	-3.566
C305-LB080212	-9.80	-9.40	-12.10	-13.10	-3.459
C305-LB080213	-8.80	-8.40	-10.10	-11.00	-2.305
C305-LB080214	-7.10	-6.40	-7.60	-8.00	-1.167
C305-LB080215	-5.40	-5.10	-5.50	-6.00	-0.646
C305-LB080216	-4.20	-4.10	-3.80	-4.50	-0.188
C305-LB080217	-3.30	-2.90	-2.70	-3.70	-0.348
C305-LB080218	-1.90	-1.80	-0.80	-2.10	0.072
	Rate less than -2.5mm/year			% less 2mm/ year	73%
	Rate greater than -3.5mm/year			% less 3mm/ year	91%

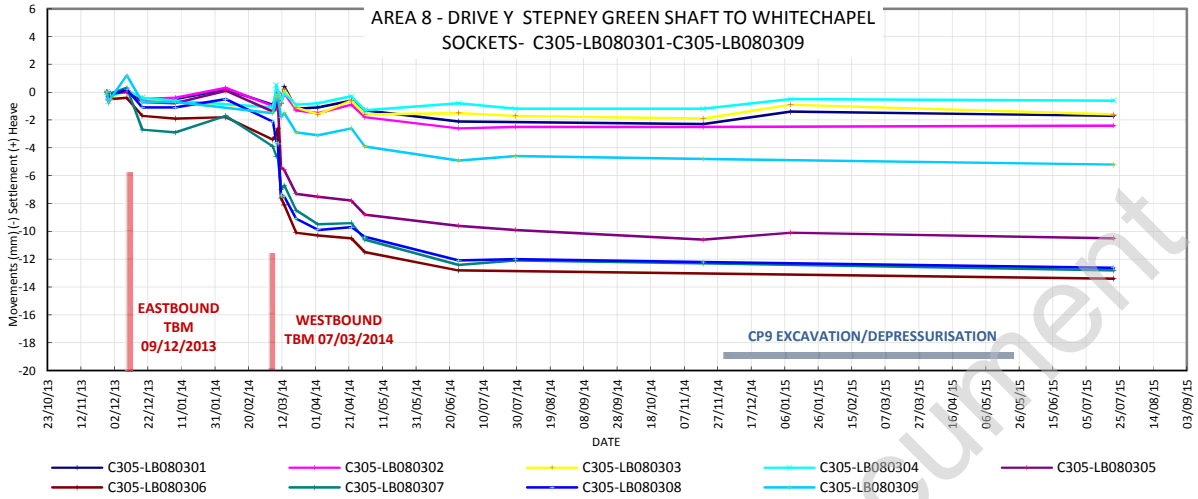
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of the sockets with a settlement rate less than 2mm/year is 73%, whereas 91% are less than 3mm/year.

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



C305-LB080301 - C305-LB080309



The graph above shows a maximum settlement of -2.9mm after the eastbound TBM transit and a -12.8mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -13.4mm was recorded after CP9 works.

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

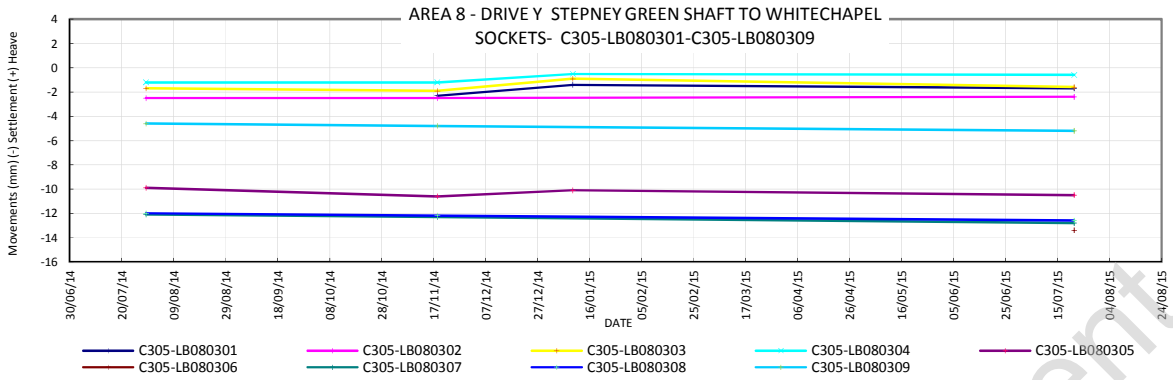
The table below shows the annual rate for the sockets in this array.

	Registered movement (mm)				Rate (mm/year)
	29/07/2014	18/11/2014	09/01/2015	21/07/2015	
C305-LB080301	#N/A	-2.30	-1.40	-1.70	0.497
C305-LB080302	-2.50	-2.50	#N/A	-2.40	0.110
C305-LB080303	-1.70	-1.90	-0.90	-1.60	0.185
C305-LB080304	-1.20	-1.20	-0.50	-0.60	0.675
C305-LB080305	-9.90	-10.60	-10.10	-10.50	-0.482
C305-LB080306	#N/A	#N/A	#N/A	-13.40	-
C305-LB080307	-12.10	-12.30	#N/A	-12.80	-0.720
C305-LB080308	-12.00	-12.20	#N/A	-12.60	-0.611
C305-LB080309	-4.60	-4.80	#N/A	-5.20	-0.611
	Rate less than -2.5mm/year			% less 2mm/ year	100%
	Rate greater than -3.5mm/year			% less 3mm/ year	100%

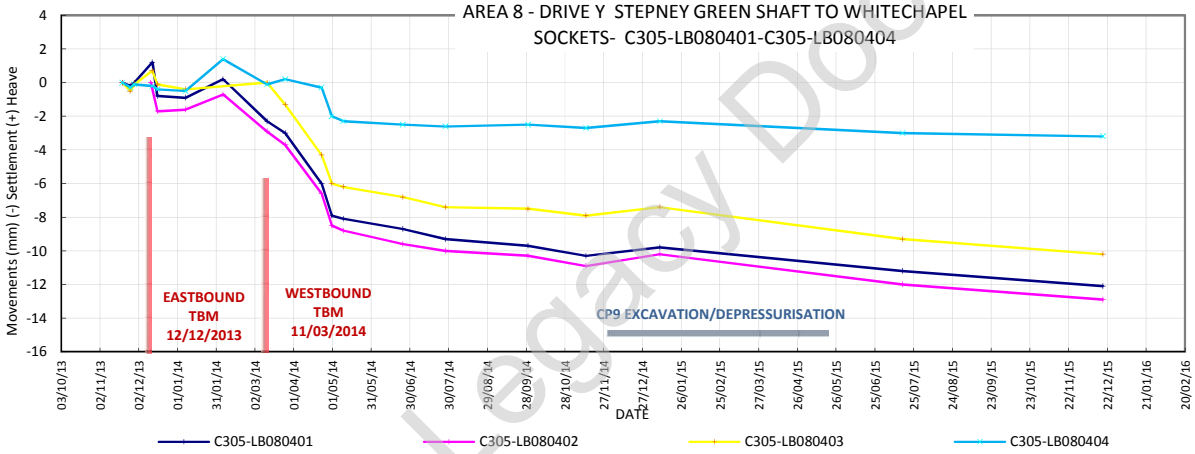
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of the sockets with a settlement rate less than 2mm/year is 100%.

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



C305-LB080401 - C305-LB080404



The graph above shows a maximum settlement of -1.7mm after the eastbound TBM transit and a -10.9mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -12.9mm was recorded after CP9 works.

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

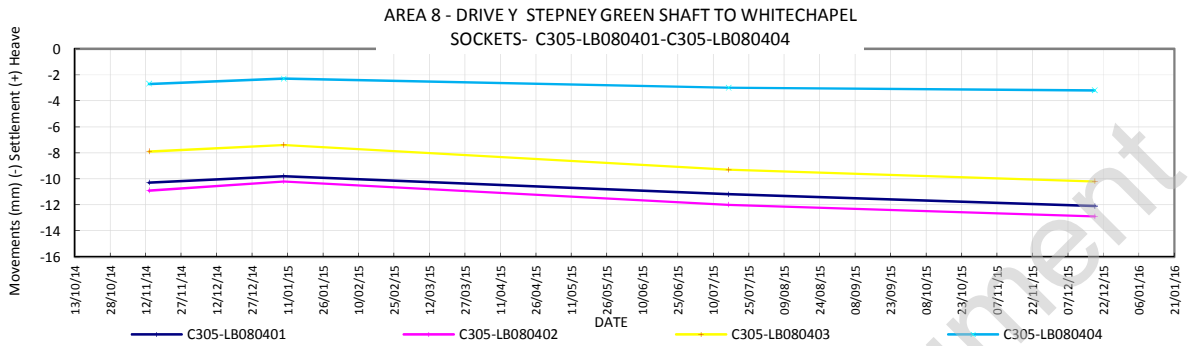
The table below shows the annual rate for the sockets in this array.

	Registered movement (mm)				Rate (mm/year)
	13/11/2014	09/01/2015	16/07/2015	18/12/2015	
C305-LB080401	-10.30	-9.80	-11.20	-12.10	-1.918
C305-LB080402	-10.90	-10.20	-12.00	-12.90	-2.219
C305-LB080403	-7.90	-7.40	-9.30	-10.20	-2.454
C305-LB080404	-2.70	-2.30	-3.00	-3.20	-0.658
	Rate less than -2.5mm/year			% less 2mm/ year	100%
	Rate greater than -3.5mm/year			% less 3mm/ year	100%

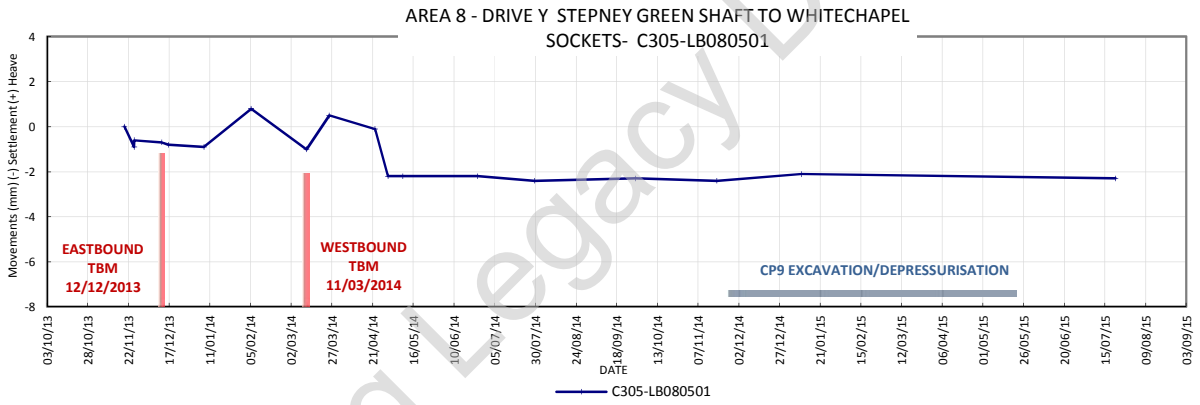
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of the sockets with a settlement rate less than 2mm/year is 100%.

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



C305-LB080501



The graph above shows a maximum settlement of -0.9mm after the eastbound TBM transit and a -2.4mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -2.3mm was recorded after CP9 works.

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

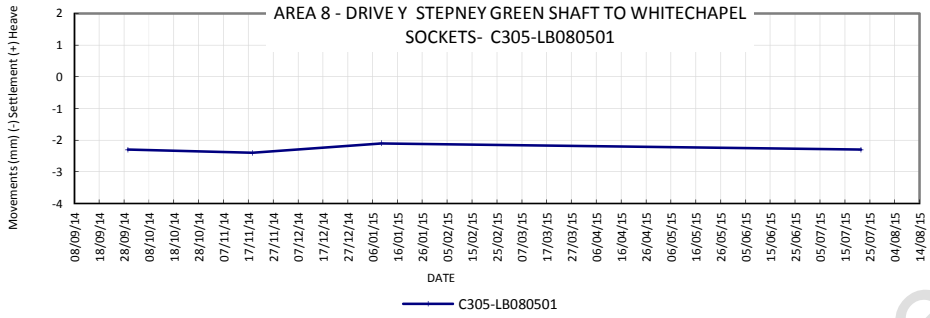
The table below shows the annual rate for this socket.

	Registered movement (mm)				mm/year
	29/09/2014	18/11/2014	09/01/2015	21/07/2015	
C305-LB080501	-2.30	-2.40	-2.10	-2.30	0.031

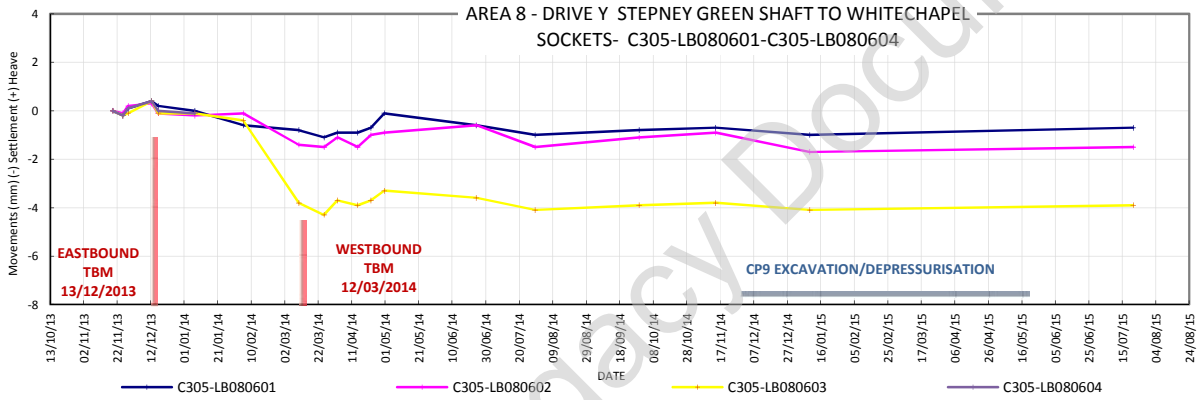
Note: All the movements are in mm. (-) Settlement / (+) Heave

The settlement rate are less than 2mm/year.

The plot below shows the trend line adjustment for this socket.



C305-LB080601 - C305-LB080604



The graph above shows a maximum settlement of -3.8mm after the eastbound TBM transit and a -4.3mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -3.9mm was recorded after CP9 works.

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

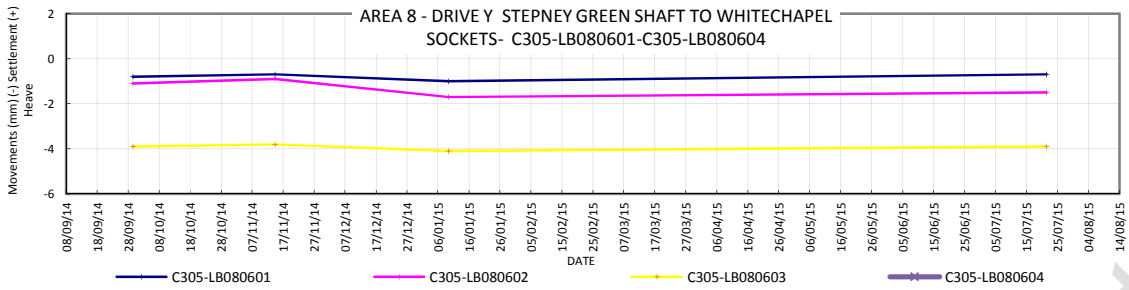
The table below shows the annual rate for the sockets in this array.

	Registered movement (mm)				Rate (mm/year)
	29/09/2014	14/11/2014	09/01/2015	21/07/2015	
LB080601	-0.80	-0.70	-1.00	-0.70	0.099
LB080602	-1.10	-0.90	-1.70	-1.50	-0.589
LB080603	-3.90	-3.80	-4.10	-3.90	-0.034
LB080604	#N/A	#N/A	#N/A	#N/A	-
	Rate less than -2.5mm/year			% less 2mm/ year	100%
	Rate greater than -			% less 3mm/ year	100%

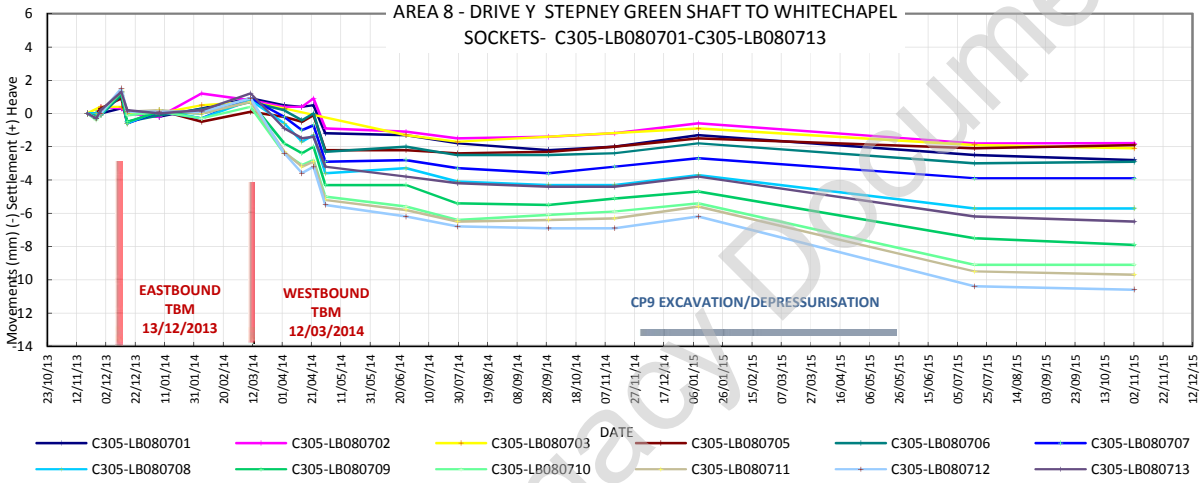
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of the sockets with a settlement rate less than 2mm/year is 100%.

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



C305-LB080701 - C305-LB080713



The graph above shows a heave of +1mm followed by a total maximum -0.5mm settlement after the eastbound TBM transit and a -6.9 mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -10.6mm was recorded after CP9 works.

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

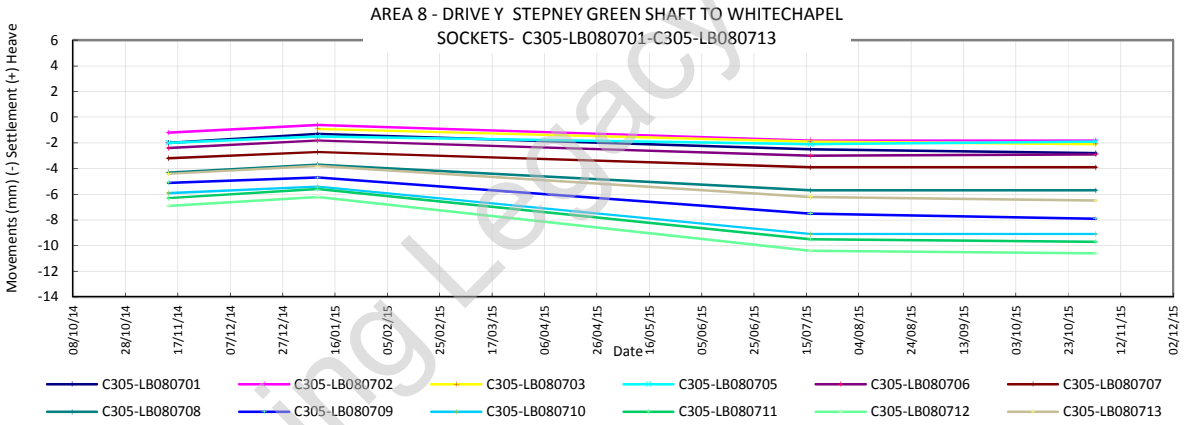
The table below shows the annual rate for the sockets in this array.

	Registered movement (mm)				Rate (mm/year)
	13/11/2014	09/01/2015	16/07/2015	02/11/2015	
C305-LB080701	-2	-1.3	-2.50	-2.80	-1.205
C305-LB080702	-1.2	-0.6	-1.80	-1.80	-1.022
C305-LB080703	#N/A	-0.9	-1.90	-2.10	-1.526
C305-LB080705	-2	-1.5	-2.10	-1.90	-0.192
C305-LB080706	-2.4	-1.8	-3.00	-2.90	-0.936
C305-LB080707	-3.2	-2.7	-3.90	-3.90	-1.096
C305-LB080708	-4.3	-3.7	-5.70	-5.70	-1.998
C305-LB080709	-5.1	-4.7	-7.50	-7.90	-3.465
C305-LB080710	-5.9	-5.4	-9.10	-9.10	-4.148
C305-LB080711	-6.3	-5.6	-9.50	-9.70	-4.416
C305-LB080712	-6.9	-6.2	-10.40	-10.60	-4.782
C305-LB080713	-4.4	-3.8	-6.20	-6.50	-2.744
	Rate less than -2.5mm/year			% less 2mm/ year	58%
	Rate greater than -3.5mm/year			% less 3mm/ year	75%

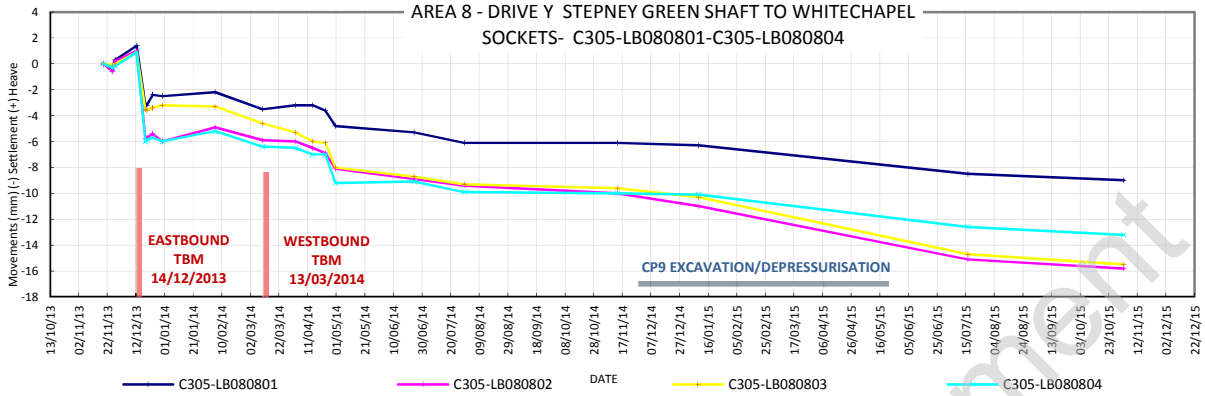
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of the sockets with a settlement rate less than 2mm/year is 58%, whereas 75% are less than 3mm/year.

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



C305-LB080801 - C305-LB080804



The graph above shows a maximum settlement of -6mm after the eastbound TBM transit and a -10mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -15.5mm was recorded after CP9 works.

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

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

	Registered movement (mm)				Rate (mm/year)
	13/11/2014	09/01/2015	16/07/2015	02/11/2015	
C305-LB080801	-6.10	-6.30	-8.50	-9.00	-3.262
C305-LB080802	-10.00	-11.00	-15.10	-15.80	-6.344
C305-LB080803	-9.60	-10.30	-14.70	-15.50	-6.574
C305-LB080804	-10.00	-10.10	-12.60	-13.20	-3.640
	Rate less than -2.5mm/year			% less 2mm/ year	0%
	Rate greater than -3.5mm/year			% less 3mm/ year	25%

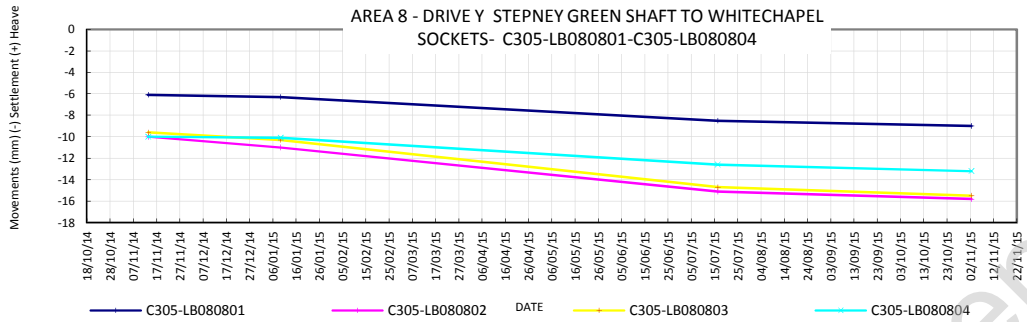
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of the sockets with a settlement rate less than 2mm/year is 0%, whereas 25% are less than 3mm/year.

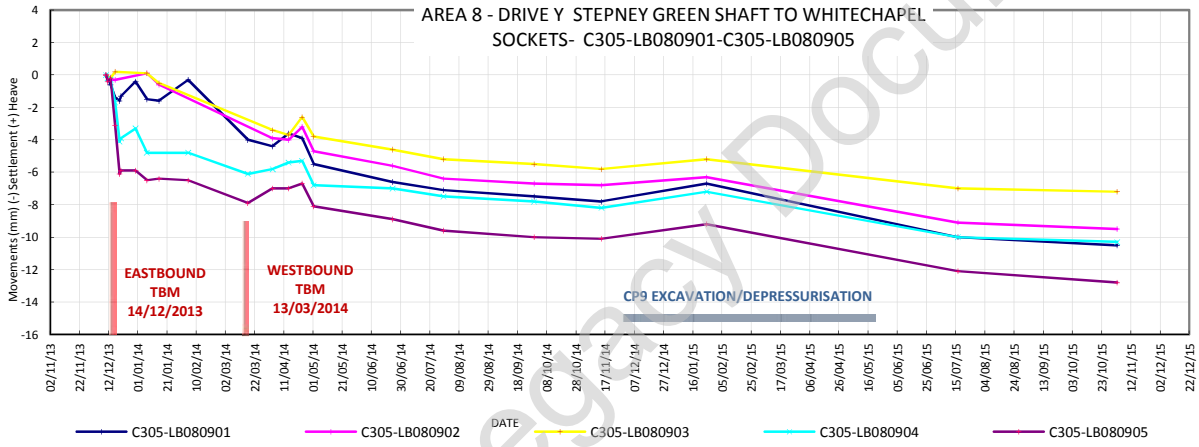
Considering the readings after CP9 construction, it is noted the trend is very similar to the nearby array C305-LP081601 to C305-LP081633, therefore the settlememnt rate can be assumed approaching the specified value 2mm/year. In fact, considering the last two readings the interpolated settlement rate is :

	Registered movement (mm)		Rate (mm/year)
	16/07/2015	02/11/2015	
C305-LB080801	-8.50	-9.00	-1.674
C305-LB080802	-15.10	-15.80	-2.344
C305-LB080803	-14.70	-15.50	-2.679
C305-LB080804	-12.60	-13.20	-2.009
	Rate less than -2.5mm/year	% less 2mm/ year	75%
	Rate greater than -3.5mm/year	% less 3mm/ year	100%

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



C305-LB080901 - C305-LB080905



The graph above shows a maximum settlement of -6.5mm after the eastbound TBM transit and a -10mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -12.8mm was recorded after CP9 works.

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

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

	Registered movement (mm)				Rate (mm/year)
	14/11/2014	25/01/2015	16/07/2015	02/11/2015	
C305-LB080901	-7.80	-6.70	-10.00	-10.50	-3.652
C305-LB080902	-6.80	-6.30	-9.10	-9.50	-3.419
C305-LB080903	-5.80	-5.20	-7.00	-7.20	-1.929
C305-LB080904	-8.20	-7.20	-10.00	-10.30	-2.938
C305-LB080905	-10.10	-9.20	-12.10	-12.80	-3.490
	Rate less than -2.5mm/year			% less 2mm/ year	20%
	Rate greater than -3.5mm/year			% less 3.5 mm/ year	80%

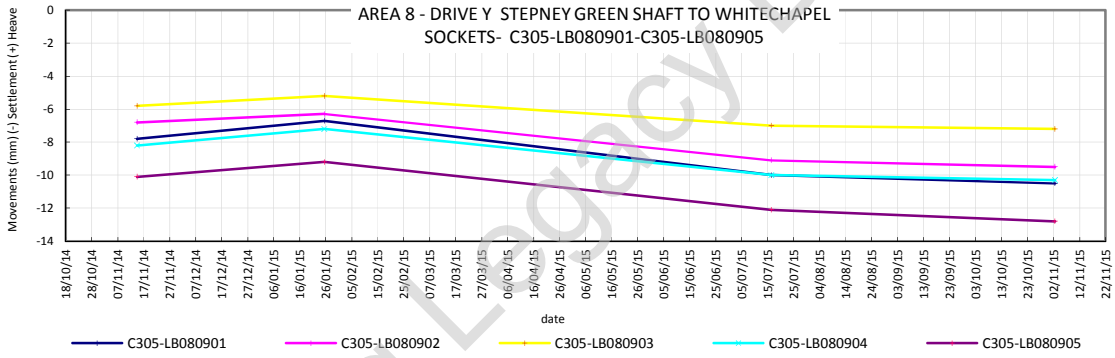
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of the sockets with a settlement rate less than 2mm/year is 20%, whereas 80% are less than 3mm/year.

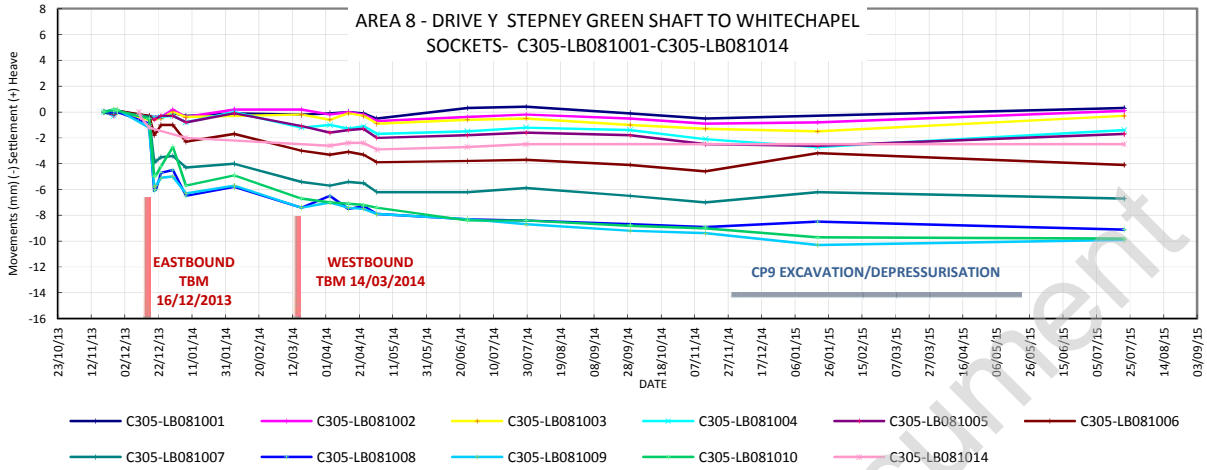
Considering the readings after CP9 construction, it is noted the trend is very similar to the nearby array C305-LP081701 to C305-LP081715, therefore the settlememnt rate can be assumed approaching the value 2mm/year. In fact, considering the last two readings the interpolated settlement rate is :

	Registered movement (mm)		Rate (mm/year)
	16/07/2015	02/11/2015	
C305-LB080901	-10.00	-10.50	-1.674
C305-LB080902	-9.10	-9.50	-1.339
C305-LB080903	-7.00	-7.20	-0.669
C305-LB080904	-10.00	-10.30	-1.004
C305-LB080905	-12.10	-12.80	-2.343
	Rate less than -2.5mm/year	% less 2mm/ year	100%
	Rate greater than -3.5mm/year	% less 3.5 mm/ year	100%

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



C305-LB081001 - C305-LB081014



The graph above shows a maximum settlement of -6.3mm after the eastbound TBM transit and a -9.4mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -10.3mm was recorded after CP9 works.

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

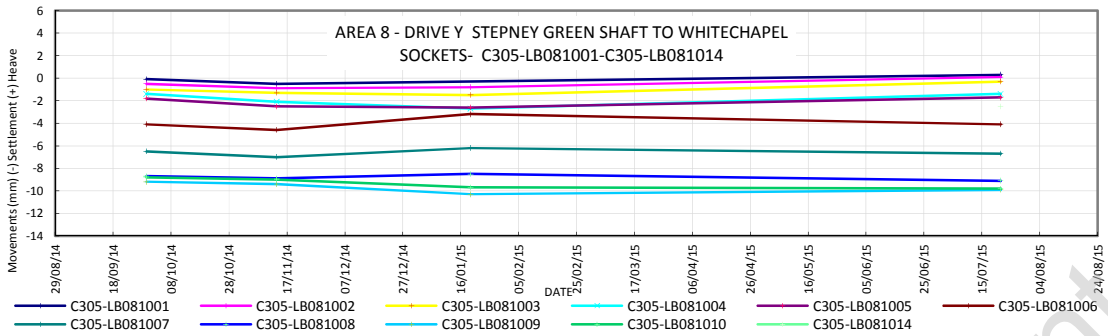
The table below shows the annual rate for the sockets in this array.

	Registered movement (mm)				Rate (mm/year)
	29/09/2014	13/11/2014	19/01/2015	21/07/2015	
C305-LB081001	-0.10	-0.50	#N/A	0.30	0.723
C305-LB081002	-0.50	-0.90	-0.80	0.10	0.988
C305-LB081003	-1.00	-1.30	-1.50	-0.30	1.071
C305-LB081004	-1.40	-2.10	-2.70	-1.40	0.353
C305-LB081005	-1.80	-2.50	-2.60	-1.70	0.481
C305-LB081006	-4.10	-4.60	-3.20	-4.10	0.239
C305-LB081007	-6.50	-7.00	-6.20	-6.70	-0.020
C305-LB081008	-8.70	-8.90	-8.50	-9.10	-0.429
C305-LB081009	-9.20	-9.40	-10.30	-9.90	-0.814
C305-LB081010	-8.80	-9.00	-9.70	-9.80	-1.210
C305-LB081014	#N/A	#N/A	#N/A	-2.50	#N/A
	Rate less than -2.5mm/year			% less 2mm/ year	100%
	Rate greater than -3.5mm/year			% less 3mm/ year	100%

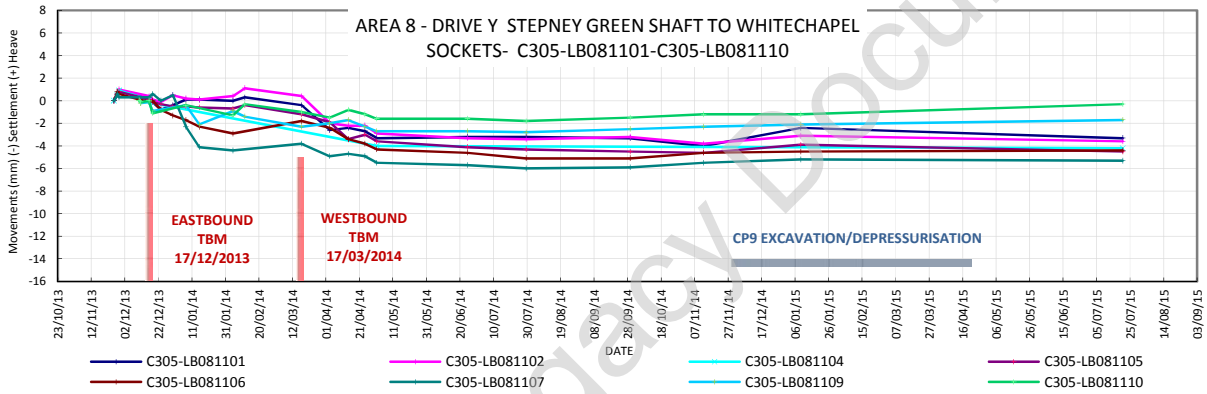
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of the sockets with a settlement rate less than 2mm/year is 100%.

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



C305-LB081101 - C305-LB081110



The graph above shows a maximum settlement of -4.4mm after the eastbound TBM transit and a -6mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -5.3mm was recorded after CP9 works.

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

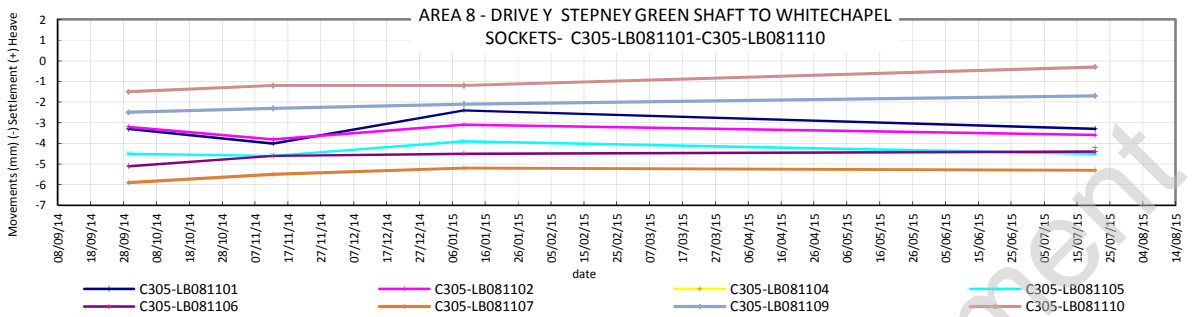
The table below shows the annual rate for the sockets in this array.

	Registered movement (mm)				Rate (mm/year)
	29/09/2014	12/11/2014	09/01/2015	20/07/2015	
C305-LB081101	-3.30	-4.00	-2.40	-3.30	0.282
C305-LB081102	-3.20	-3.80	-3.10	-3.60	-0.252
C305-LB081104	#N/A	#N/A	#N/A	-4.20	-
C305-LB081105	-4.50	-4.60	-3.90	-4.50	0.013
C305-LB081106	-5.10	-4.60	-4.50	-4.40	0.659
C305-LB081107	-5.90	-5.50	-5.20	-5.30	0.568
C305-LB081109	-2.50	-2.30	-2.10	-1.70	0.948
C305-LB081110	-1.50	-1.20	-1.20	-0.30	1.439
	Rate less than -2.5mm/year			% less 2mm/ year	100%
	Rate greater than -3.5mm/year			% less 3mm/ year	100%

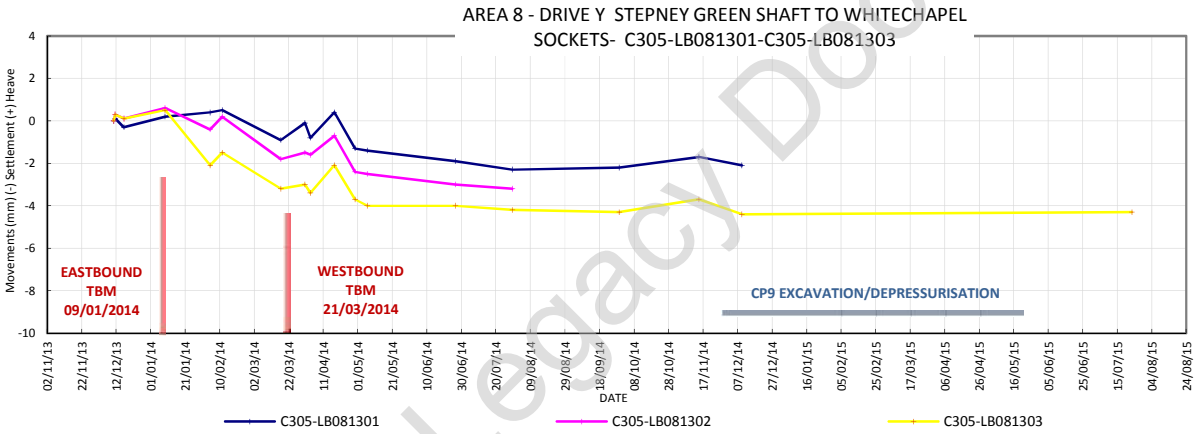
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of the sockets with a settlement rate less than 2mm/year is 100%.

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



C305-LB081301 - C305-LB081303



The graph above shows a maximum settlement of -3.2mm after the eastbound TBM transit and a -4.3mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -4.4mm was recorded after CP9 works.

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

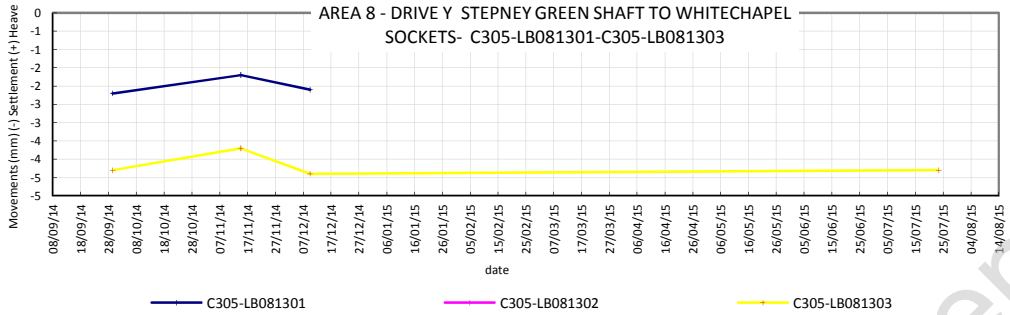
The table below shows the annual rate for the sockets in this array.

	Registered movement (mm)				Rate (mm/year)
	29/09/2014	14/11/2014	09/12/2014	23/07/2015	
C305-LB081301	-2.20	-1.70	-2.10	#N/A	0.946
C305-LB081302	#N/A	#N/A	#N/A	#N/A	-
C305-LB081303	-4.30	-3.70	-4.40	-4.30	-0.217
	Rate less than -2.5mm/year			% less 2mm/ year	100%
	Rate greater than -3.5mm/year			% less 3mm/ year	100%

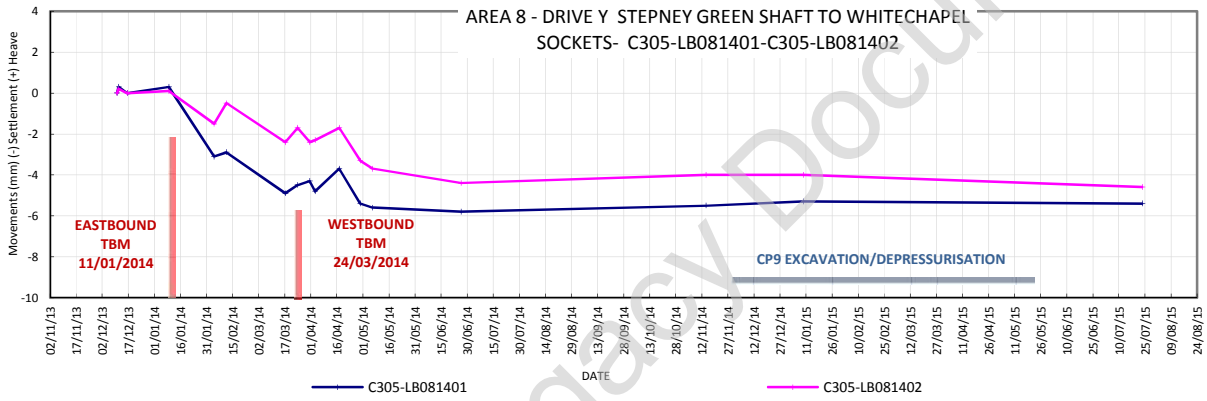
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of the sockets with a settlement rate less than 2mm/year is 100%.

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



C305-LB081401 - C305-LB081402



The graph above shows a maximum settlement of -4.9mm after the eastbound TBM transit and a -5.8mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -5.4mm was recorded after CP9 works.

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

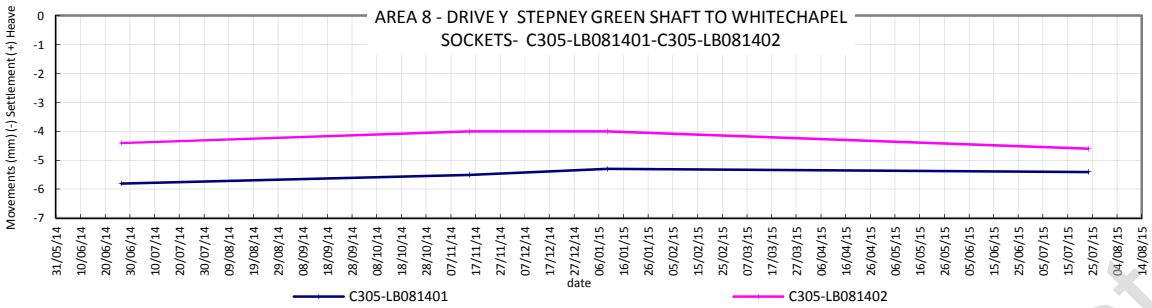
The table below shows the annual rate for the sockets in this array.

	Registered movement (mm)				Rate (mm/year)
	26/06/2014	14/11/2014	09/01/2015	23/07/2015	
C305-LB081401	-5.80	-5.50	-5.30	-5.40	0.363
C305-LB081402	-4.40	-4.00	-4.00	-4.60	-0.243
	Rate less than -2.5mm/year			% less 2mm/ year	100%
	Rate greater than -3.5mm/year			% less 3mm/ year	100%

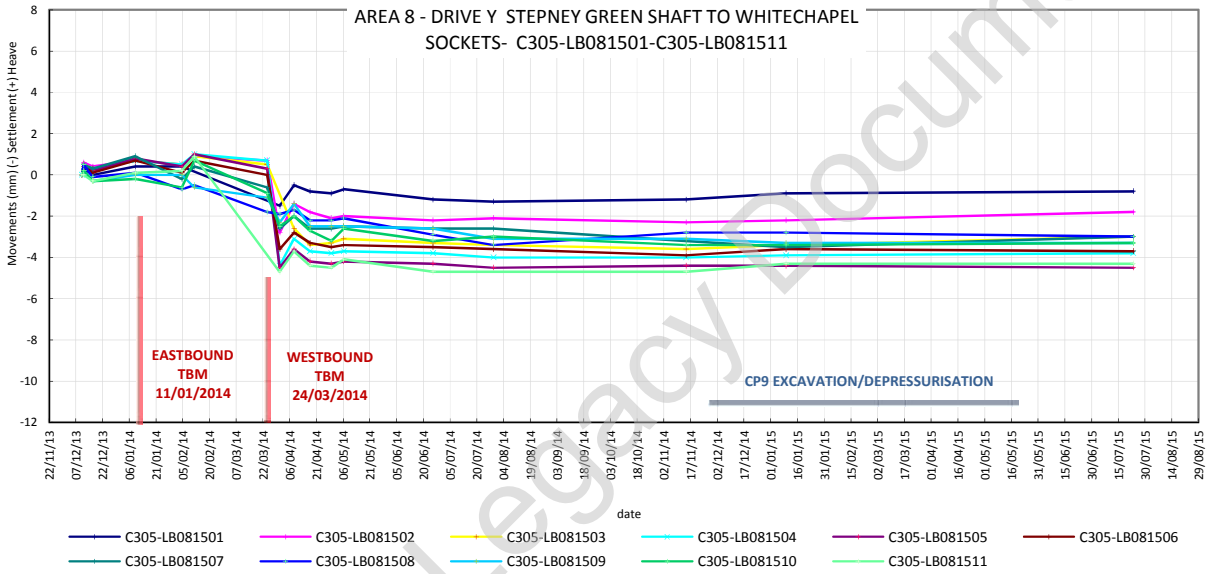
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of the sockets with a settlement rate less than 2mm/year is 100%.

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



C305-LB081501 - C305-LB081511



The graph above shows a maximum settlement of -0.7mm after the eastbound TBM transit and a -4.7mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -4.3mm was recorded after CP9 works.

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

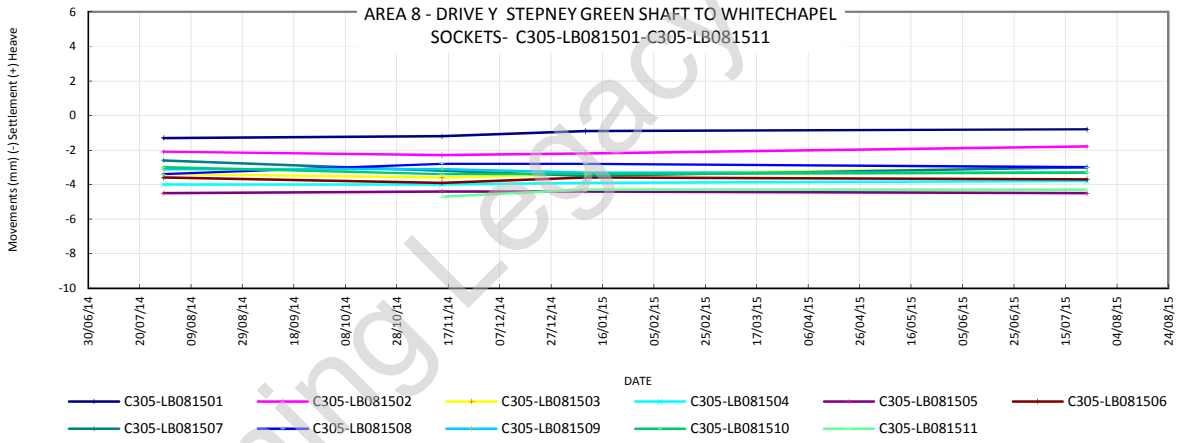
The table below shows the annual rate for the sockets in this array.

	Registered movement (mm)				Rate (mm/year)
	29/07/2014	14/11/2014	09/01/2015	23/07/2015	
C305-LB081501	-1.30	-1.20	-0.90	-0.80	0.528
C305-LB081502	-2.10	-2.30	-2.20	-1.80	0.374
C305-LB081503	-3.40	-3.60	-3.40	-3.00	0.486
C305-LB081504	-4.00	-4.00	-3.90	-3.80	0.220
C305-LB081505	-4.50	-4.40	-4.40	-4.50	-0.023
C305-LB081506	-3.60	-3.90	-3.60	-3.70	-0.028
C305-LB081507	-2.60	-3.20	-3.50	-3.00	-0.303
C305-LB081508	-3.40	-2.80	-2.80	-3.00	0.293
C305-LB081509	-3.10	-3.10	-3.30	-3.30	-0.223
C305-LB081510	-3.00	-3.40	-3.40	-3.30	-0.231
C305-LB081511	#N/A	-4.70	-4.30	-4.30	0.431
	Rate less than -2.5mm/year			% less 2mm/ year	100%
	Rate greater than -3.5mm/year			% less 3mm/ year	100%

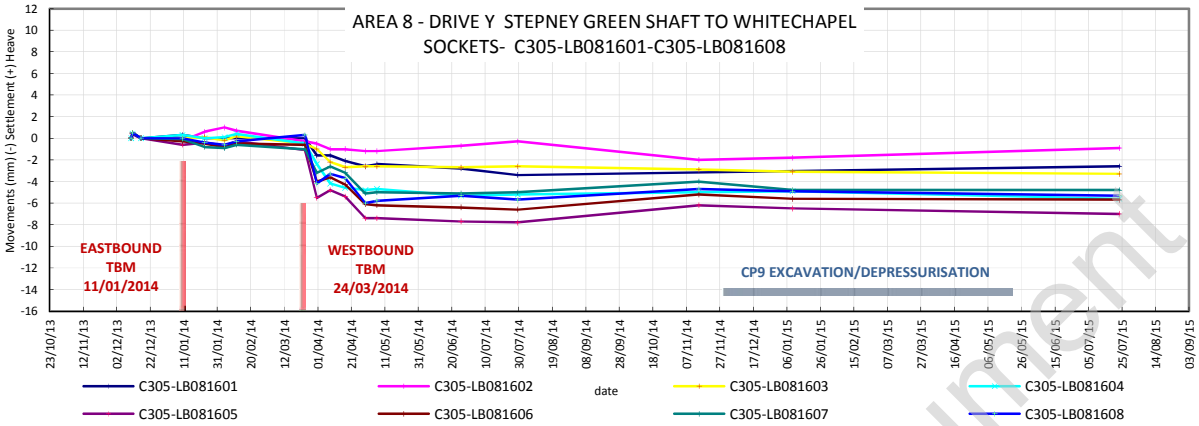
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of the sockets with a settlement rate less than 2mm/year is 100%.

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



C305-LB081601 - C305-LB081608



The graph above shows a maximum settlement of -0.9mm after the eastbound TBM transit and a -7.8mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -7mm was recorded after CP9 works.

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

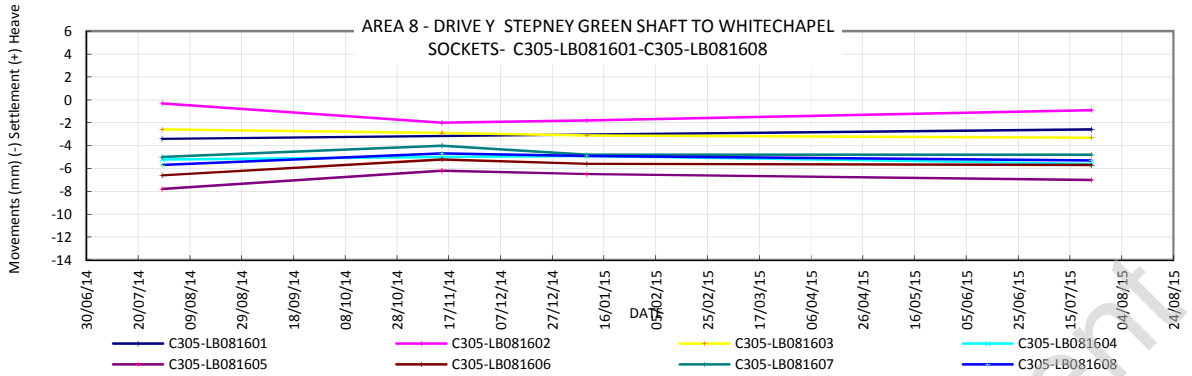
The table below shows the annual rate for the sockets in this array.

	Registered movement (mm)				Rate (mm/year)
	29/07/2014	14/11/2014	09/01/2015	23/07/2015	
C305-LB081601	-3.40	#N/A	#N/A	-2.60	0.813
C305-LB081602	-0.30	-2.00	-1.80	-0.90	-0.245
C305-LB081603	-2.60	-2.90	-3.10	-3.30	-0.694
C305-LB081604	-5.20	-5.00	-4.90	-5.60	-0.476
C305-LB081605	-7.80	-6.20	-6.50	-7.00	0.481
C305-LB081606	-6.60	-5.20	-5.60	-5.70	0.633
C305-LB081607	-5.00	-4.00	-4.80	-4.80	-0.044
C305-LB081608	-5.70	-4.70	-4.90	-5.30	0.192
	Rate less than -2.5mm/year			% less 2mm/ year	100%
	Rate greater than -3.5mm/year			% less 3mm/ year	100%

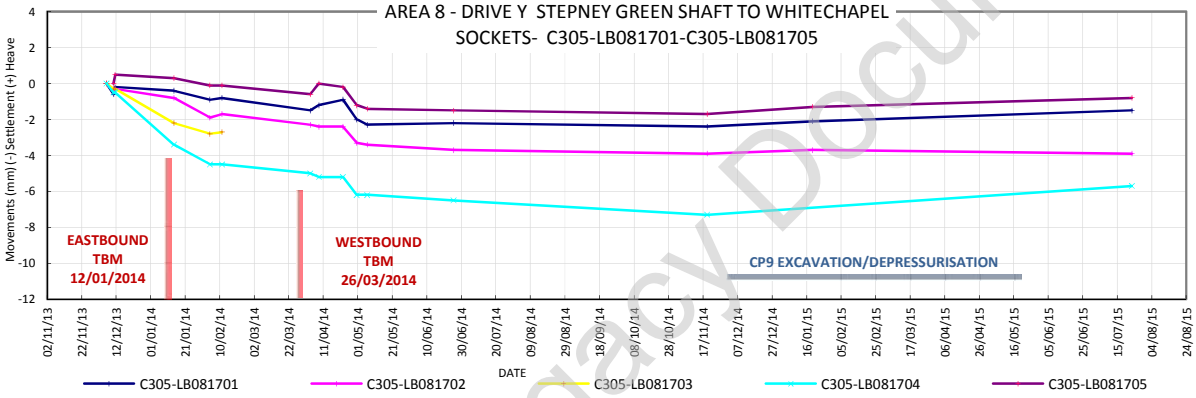
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of the sockets with a settlement rate less than 2mm/year is 100%.

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



C305-LB081701 - C305-LB081705



The graph above shows a maximum settlement of -4.5mm after the eastbound TBM transit and a -7.3mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -5.7mm was recorded after CP9 works.

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

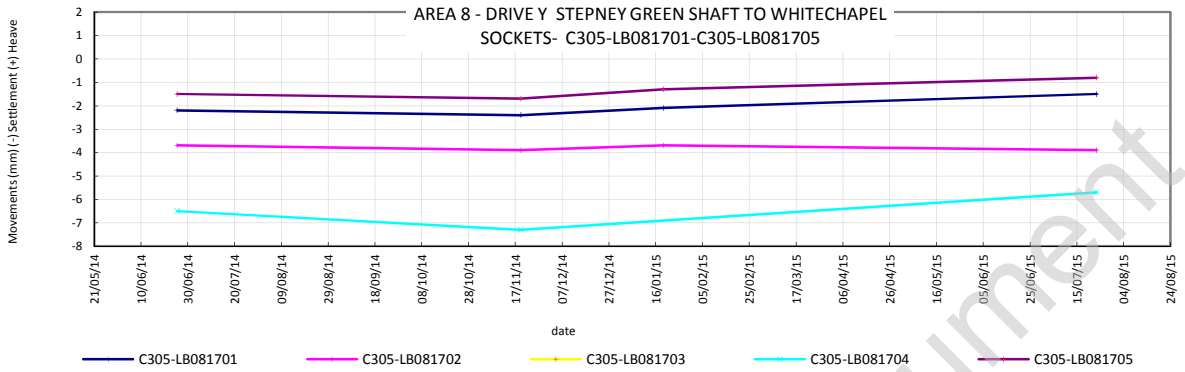
The table below shows the annual rate for the sockets in this array.

	Registered movement (mm)				Rate (mm/year)
	25/06/2014	19/11/2014	19/01/2015	23/07/2015	
C305-LB081701	-2.20	-2.40	-2.10	-1.50	0.709
C305-LB081702	-3.70	-3.90	-3.70	-3.90	-0.153
C305-LB081703	#N/A	#N/A	#N/A	#N/A	-
C305-LB081704	-6.50	-7.30	#N/A	-5.70	0.912
C305-LB081705	-1.50	-1.70	-1.30	-0.80	0.719
	Rate less than -2.5mm/year			% less 2mm/ year	100%
	Rate greater than -3.5mm/year			% less 3mm/ year	100%

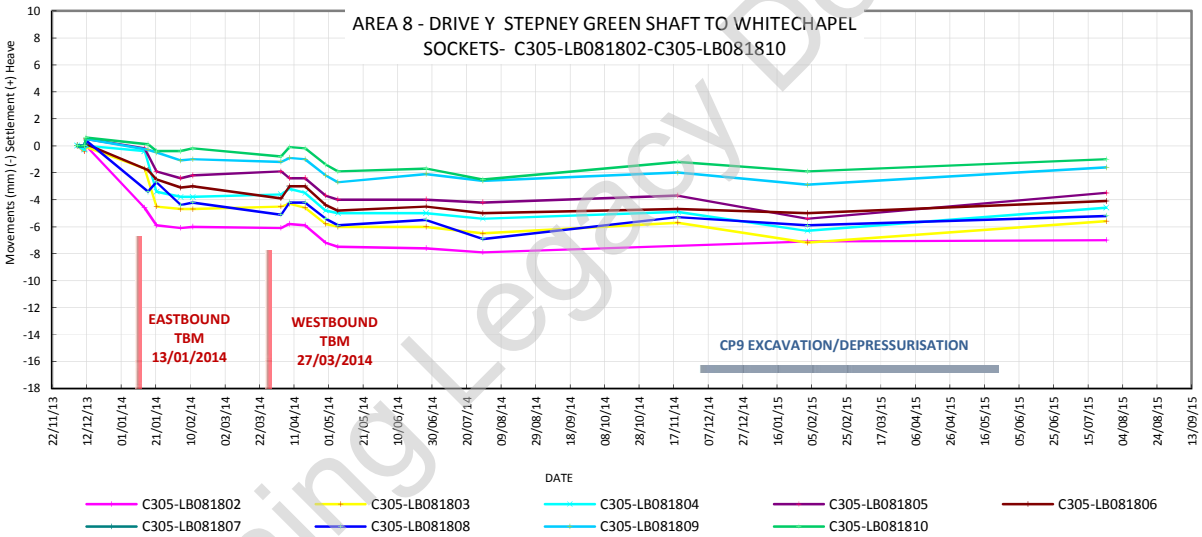
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of the sockets with a settlement rate less than 2mm/year is 100%.

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



C305-LB081802 - C305-LB081810



The graph above shows a maximum settlement of -6.1mm after the eastbound TBM transit and a -7.9mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -7.2mm was recorded after CP9 works.

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

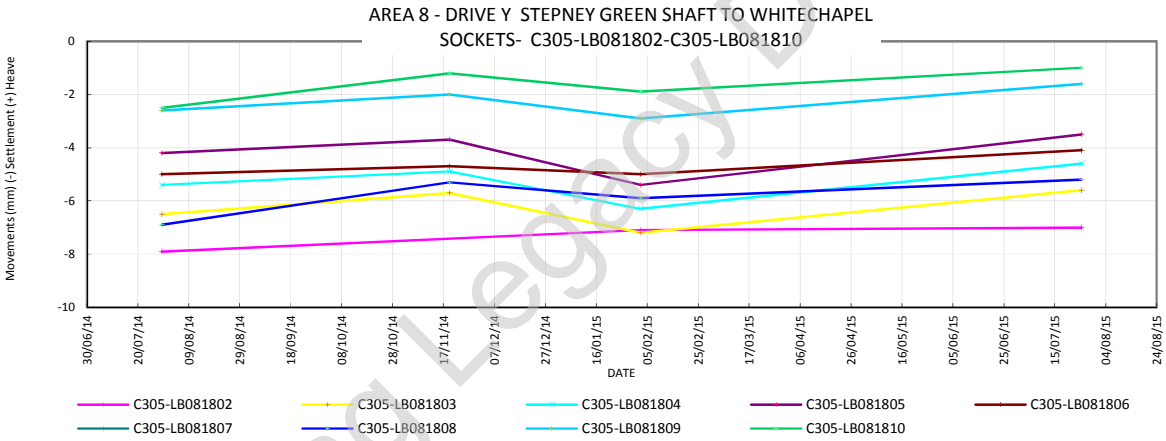
The table below shows the annual rate for the sockets in this array.

	Registered movement (mm)				Rate (mm/year)
	29/07/2014	19/11/2014	02/02/2015	25/07/2015	
C305-LB081802	-7.90	#N/A	-7.10	-7.00	0.913
C305-LB081803	-6.50	-5.70	-7.20	-5.60	0.626
C305-LB081804	-5.40	-4.90	-6.30	-4.60	0.582
C305-LB081805	-4.20	-3.70	-5.40	-3.50	0.443
C305-LB081806	-5.00	-4.70	-5.00	-4.10	0.849
C305-LB081807	#N/A	#N/A	#N/A	#N/A	-
C305-LB081808	-6.90	-5.30	-5.90	-5.20	1.435
C305-LB081809	-2.60	-2.00	-2.90	-1.60	0.833
C305-LB081810	-2.50	-1.20	-1.90	-1.00	1.263
	Rate less than -2.5mm/year			% less 2mm/ year	100%
	Rate greater than -3.5mm/year			% less 3mm/ year	100%

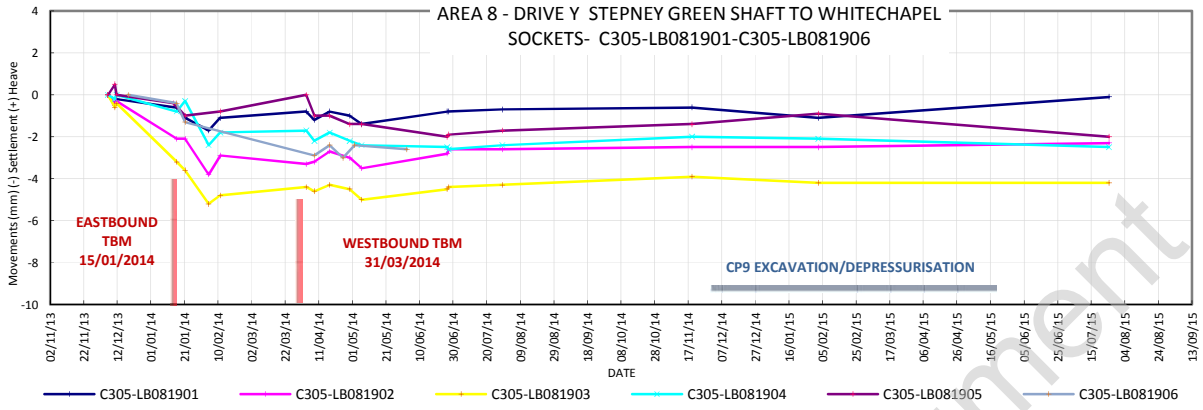
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of the sockets with a settlement rate less than 2mm/year is 100%.

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



C305-LB081901 - C305-LB081906



The graph above shows a maximum settlement of -5.2mm after the eastbound TBM transit and a -5mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -4.2mm was recorded after CP9 works.

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

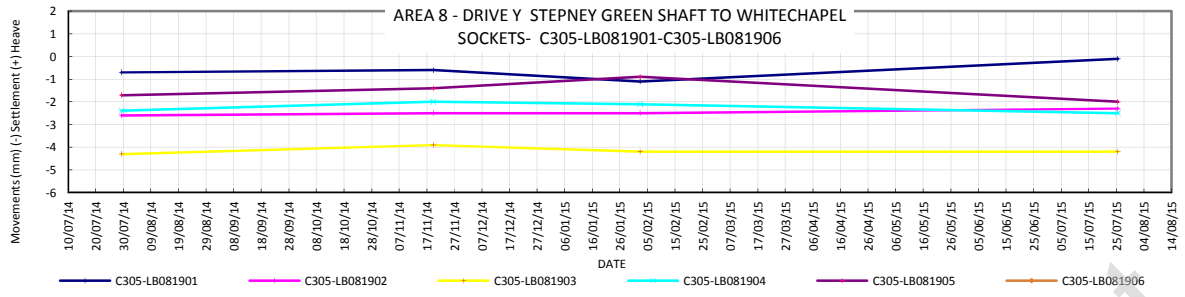
The table below shows the annual rate for the sockets in this array.

	Registered movement (mm)				Rate (mm/yea)r
	29/07/2014	19/11/2014	02/02/2015	25/07/2015	
C305-LB081901	-0.70	-0.60	-1.10	-0.10	0.546
C305-LB081902	-2.60	-2.50	-2.50	-2.30	0.295
C305-LB081903	-4.30	-3.90	-4.20	-4.20	0.004
C305-LB081904	-2.40	-2.00	-2.10	-2.50	-0.179
C305-LB081905	-1.70	-1.40	-0.90	-2.00	-0.299
C305-LB081906	#N/A	#N/A	#N/A	#N/A	-
	Rate less than -2.5mm/year			% less 2mm/ year	100%
	Rate greater than -3.5mm/year			% less 3mm/ year	100%

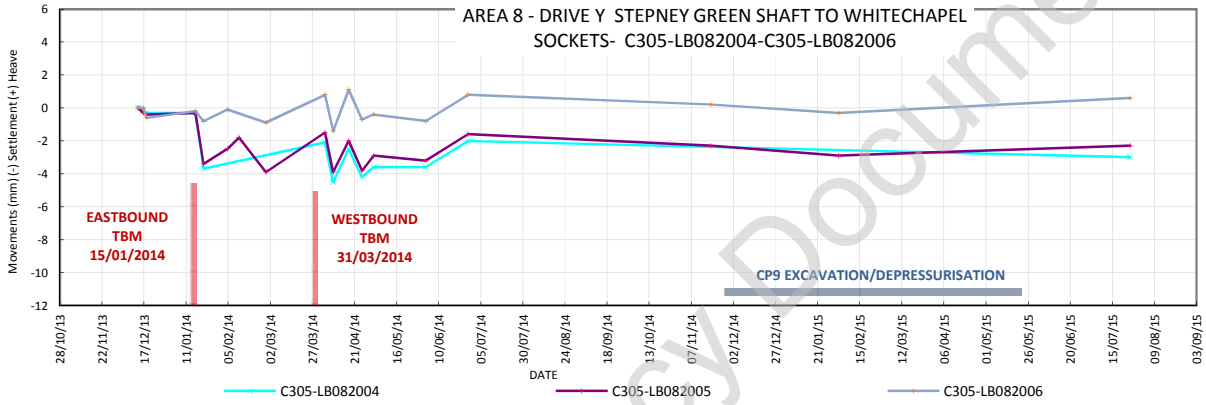
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of the sockets with a settlement rate less than 2mm/year is 100%.

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



C305-LB082004 - C305-LB082006



The graph above shows a maximum settlement of -3.9mm after the eastbound TBM transit and a -4.5mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -3mm was recorded after CP9 works.

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

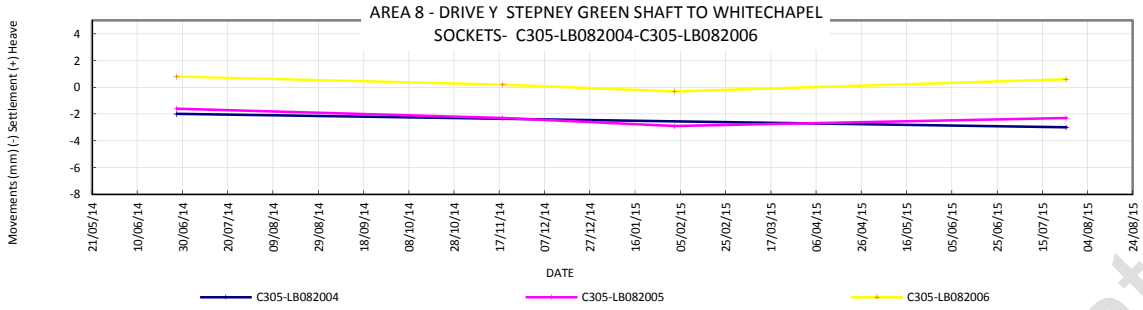
The table below shows the annual rate for the sockets in this array.

	Registered movement (mm)				Rate (mm/year)
	27/06/2014	18/11/2014	02/02/2015	25/07/2015	
C305-LB082004	-2.00	#N/A	#N/A	-3.00	-0.928
C305-LB082005	-1.60	-2.30	-2.90	-2.30	-0.686
C305-LB082006	0.80	0.20	-0.30	0.60	-0.215
	Rate less than -2.5mm/year			% less 2mm/ year	100%
	Rate greater than -3.5mm/year			% less 3mm/ year	100%

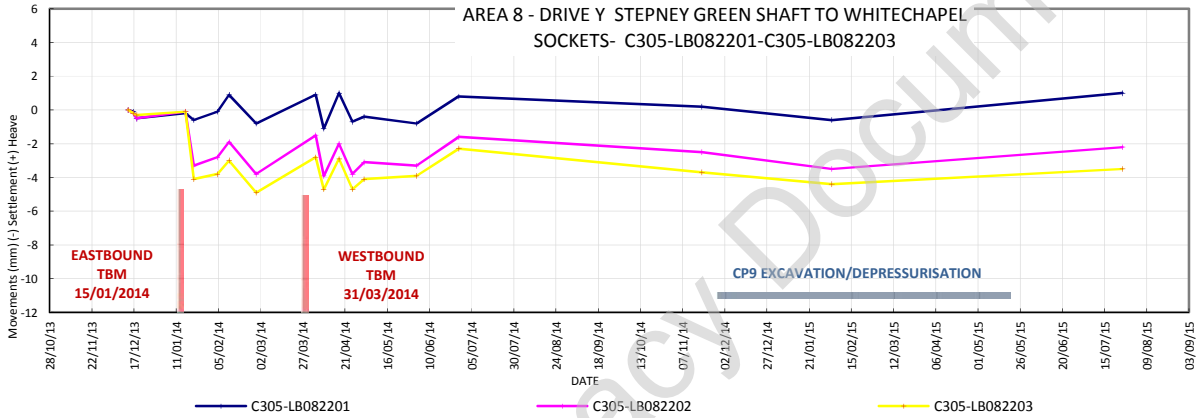
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of the sockets with a settlement rate less than 2mm/year is 100%.

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



C305-LB082201 - C305-LB082203



The graph above shows a maximum settlement of -4.9mm after the eastbound TBM transit and a -4.7mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -4.4mm was recorded after CP9 works.

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

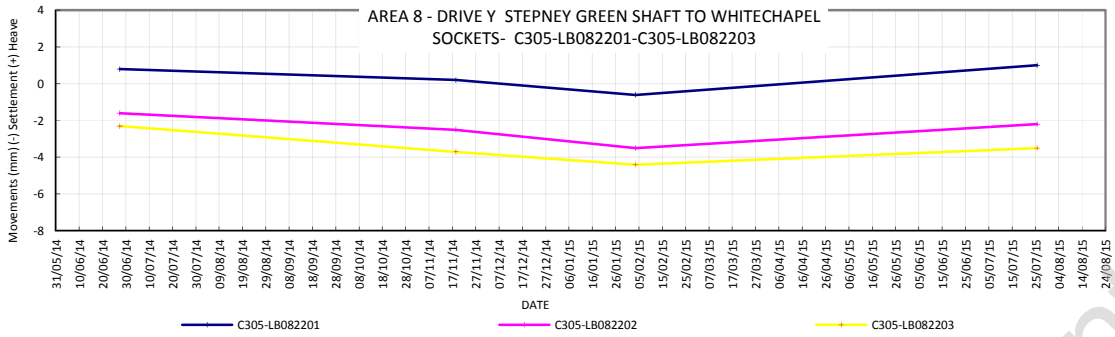
The table below shows the annual rate for the sockets in this array.

	Registered movement (mm)				Rate (mm/year)
	27/06/2014	18/11/2014	03/02/2015	25/07/2015	
C305-LB082201	0.80	0.20	-0.60	1.00	0.109
C305-LB082202	-1.60	-2.50	-3.50	-2.20	-0.640
C305-LB082203	-2.30	-3.70	-4.40	-3.50	-1.119
	Rate less than -2.5mm/year			% less 2mm/ year	100%
	Rate greater than -3.5mm/year			% less 3mm/ year	100%

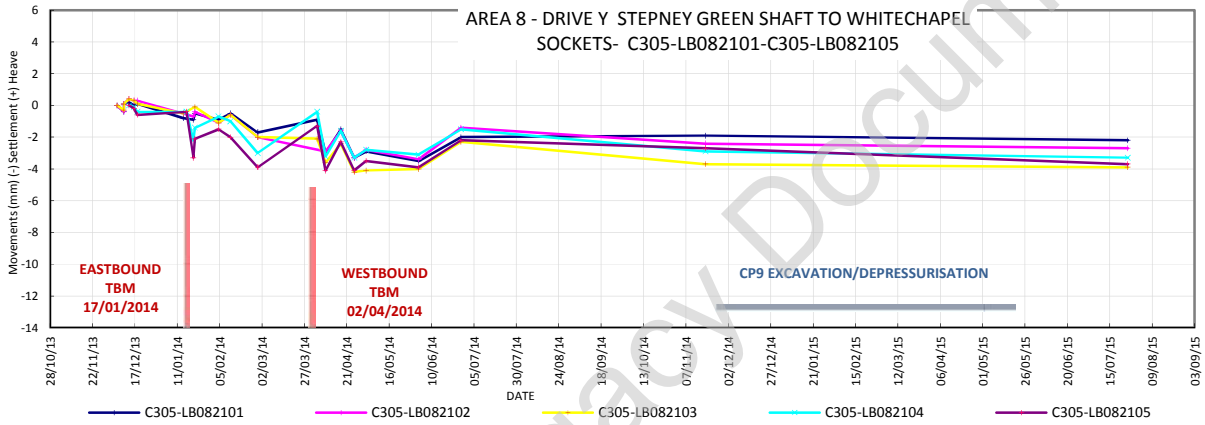
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of the sockets with a settlement rate less than 2mm/year is 100%.

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



C305-LB082101 - C305-LB082105



The graph above shows a maximum settlement of -3.9mm after the eastbound TBM transit and a -4.2mm total maximum settlement after the westbound TBM transit. A total maximum settlement of -3.9mm was recorded after CP9 works.

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

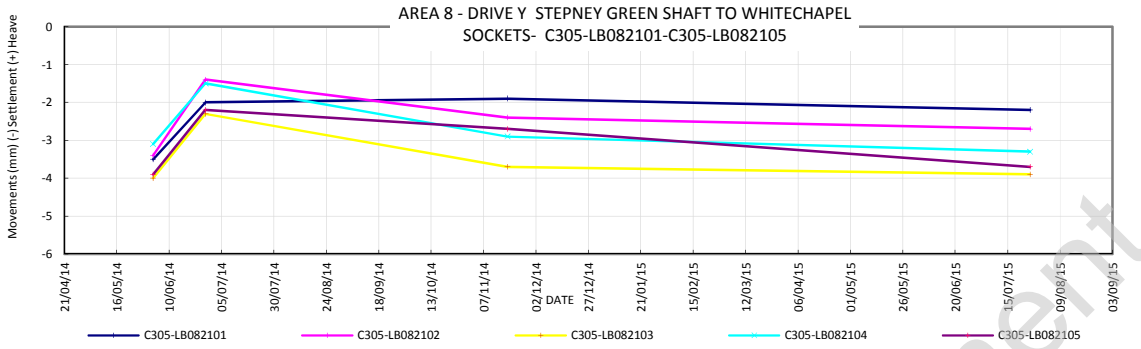
The table below shows the annual rate for the sockets in this array.

	Registered movement (mm)				Rate (mm/year)
	02/06/2014	27/06/2014	18/11/2014	25/07/2015	
C305-LB082101	-3.50	-2.00	-1.90	-2.20	0.589
C305-LB082102	-3.40	-1.40	-2.40	-2.70	-0.180
C305-LB082103	-4.00	-2.30	-3.70	-3.90	-0.616
C305-LB082104	-3.10	-1.50	-2.90	-3.30	-0.842
C305-LB082105	-3.90	-2.20	-2.70	-3.70	-0.481
	Rate less than -2.5mm/year			% less 2mm/ year	100%
	Rate greater than -3.5mm/year			% less 3mm/ year	100%

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

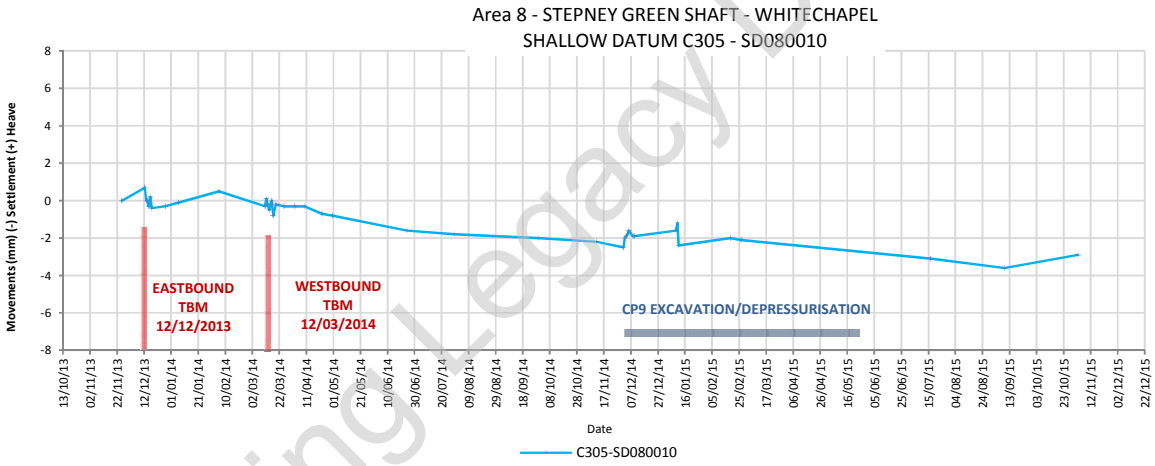
The percentage of the sockets with a settlement rate less than 2mm/year is 100%.

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



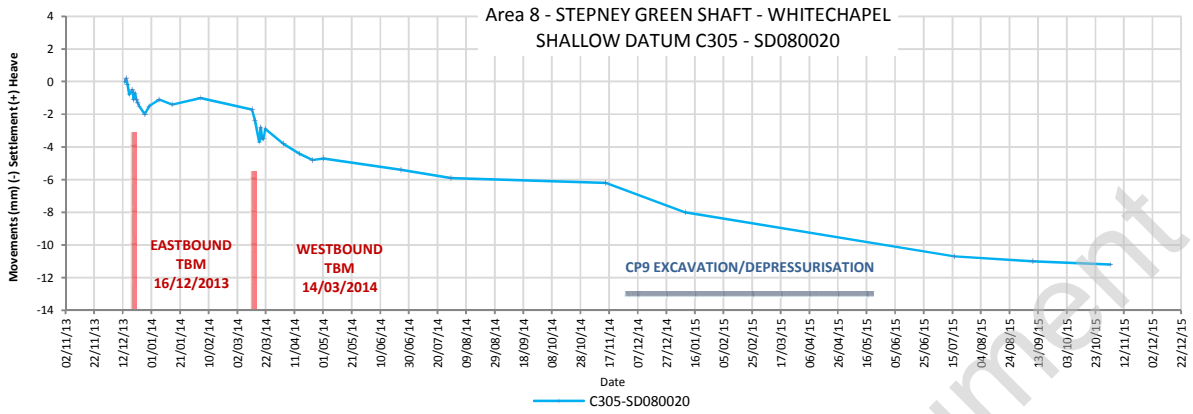
SHALLOW DATUM

C305-SD080010



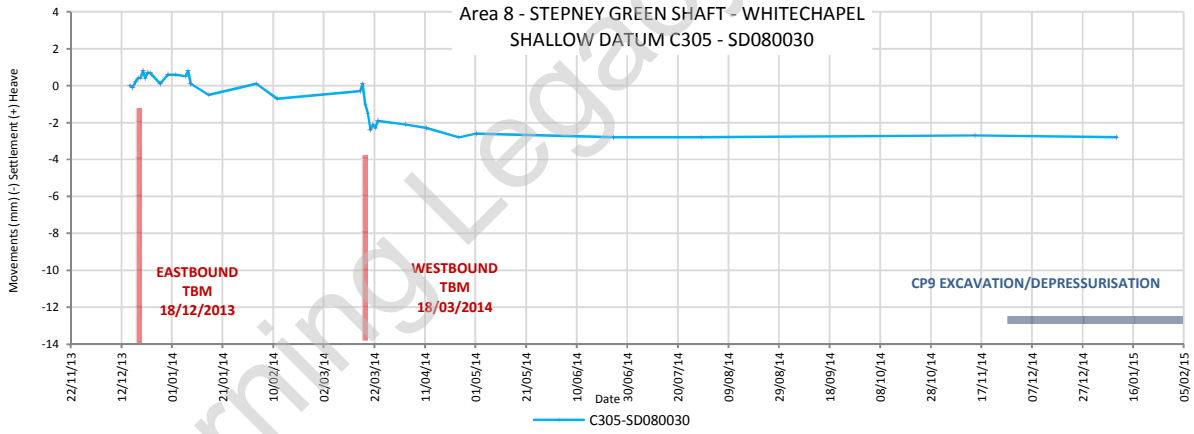
The graph above for shallow datum C305-SD080010 shows an absolute settlement of -0.4mm after the eastbound TBM transit and a total maximum absolute settlement of -2.2mm settlement after the westbound TBM transit. A total maximum absolute settlement of -3.6mm was recorded after CP9 works.

C305-SD080020



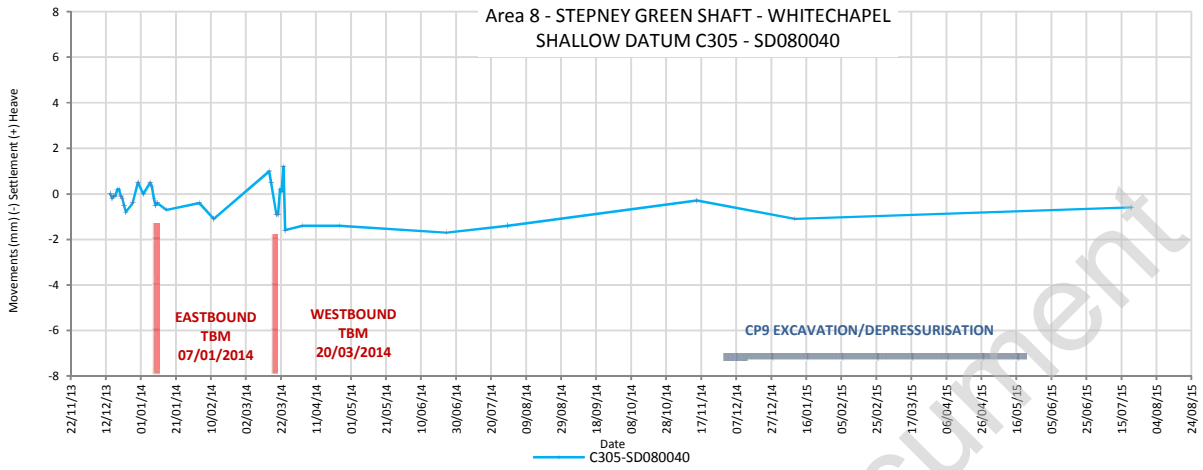
The graph above for shallow datum C305-SD080020 shows an absolute settlement of -2mm after the eastbound TBM transit and a total maximum absolute settlement of -6.2mm settlement after the westbound TBM transit. A total maximum absolute settlement of -11.2mm was recorded after CP9 works.

C305-SD080030



The graph above for shallow datum C305-SD080030 shows an absolute settlement of -0.7mm after the eastbound TBM transit and a total maximum absolute settlement of -2.8mm settlement after the westbound TBM transit. A total maximum absolute settlement of -2.8mm was recorded during CP9 works.

C305-SD080040

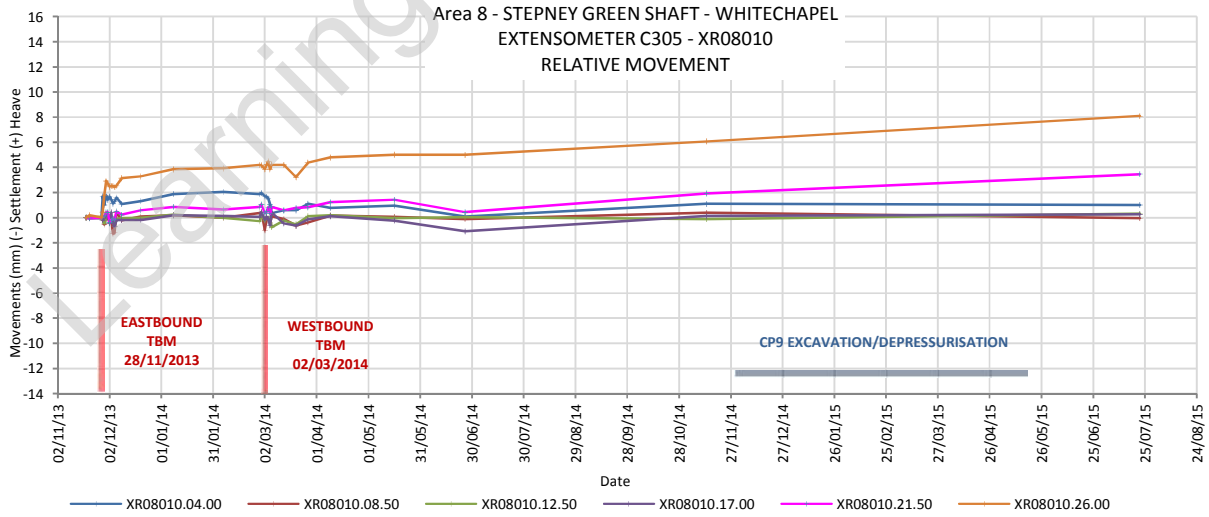


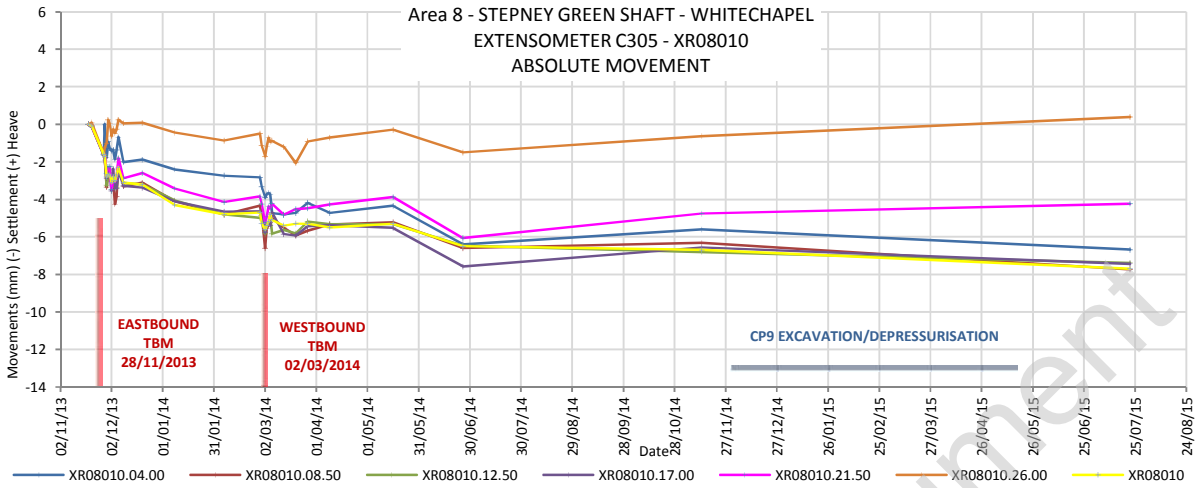
The graph above for shallow datum C305-SD080040 shows an absolute settlement of -1.1mm after the eastbound TBM transit and a total maximum absolute settlement of -1.7mm settlement after the westbound TBM transit. A total maximum absolute settlement of -1.1mm was recorded after CP9 works.

ROD EXTENSOMETERS

For every rod extensometer two graphs are displayed, showing relative and absolute movements. The relative movement graph represents the movement of the rod extensometers without taking into account the head level elevation whereas in the absolute movement the levelling of the head level has been introduced, adding the value to the relative movement of the rods.

C305-XR08010





The graph above for extensometer C305-XR08010 shows an absolute settlement of -4.8mm after the eastbound TBM transit and a total absolute settlement of -7.6mm settlement after the westbound TBM transit. A total absolute settlement of -7.7mm was recorded after CP9 works.

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

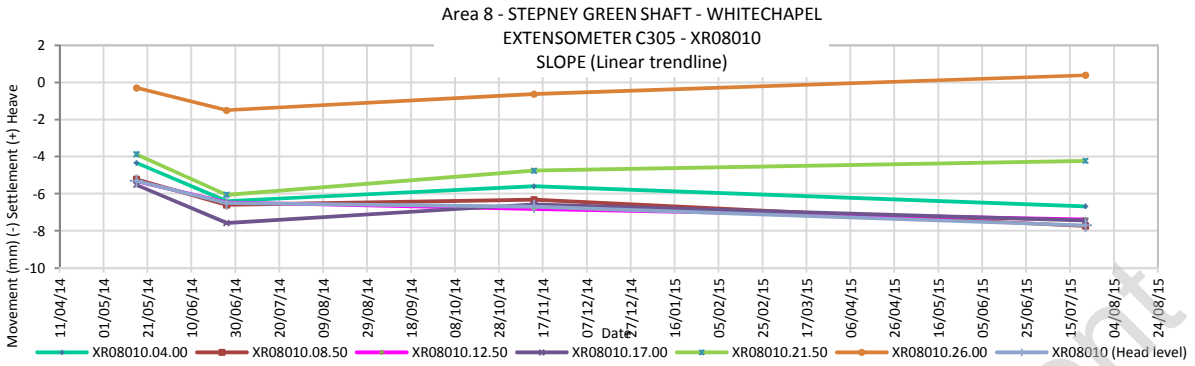
The table below shows the annual rate for each rod extensometer and head level.

	Registered Movement (mm)				Rate (mm/year)
	16/05/2014	26/06/2014	13/11/2014	22/07/2015	
C305-XR08010.04.00	-4.34	-6.40	-5.60	-6.68	-1.273
C305-XR08010.08.50	-5.22	-6.60	-6.32	-7.74	-1.685
C305-XR08010.12.50	-5.32	-6.46	-6.81	-7.39	-1.414
C305-XR08010.17.00	-5.52	-7.58	-6.56	-7.44	-0.900
C305-XR08010.21.50	-3.88	-6.06	-4.76	-4.23	0.504
C305-XR08010.26.00	-0.29	-1.50	-0.63	0.39	1.039
C305-XR08010 (Head level)	-5.30	-6.50	-6.70	-7.70	-1.669
	Rate less than -2.5mm/year		% less 2mm/ year		100.00%
	Rate greater than -3.5mm/year		% less 3mm/ year		100.00%

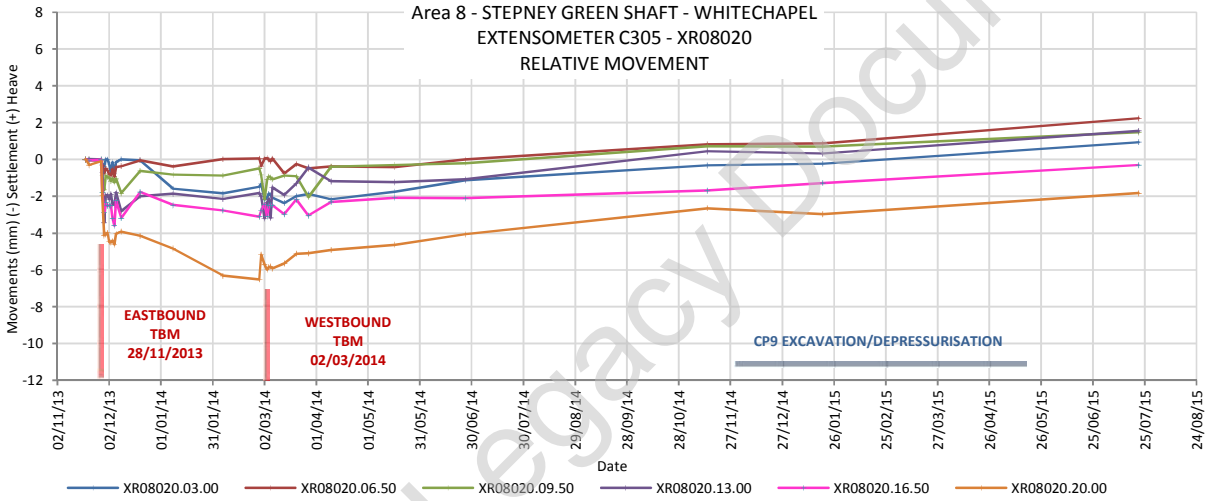
Note: All the movements are in mm. (-) Settlement / (+) Heave

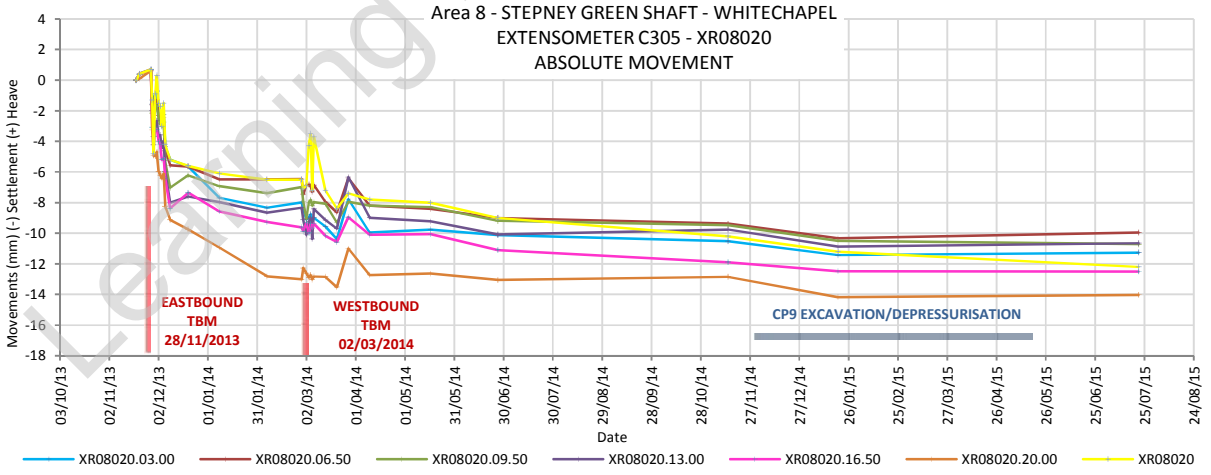
The percentage of rod sensors with a settlement rate less than 2mm/year is 100%.

The plot below shows the trend line adjustment for the rods of this extensometer.



C305-XR08020





The graph above for extensometer C305-XR08020 shows an absolute settlement of -12.8mm after the eastbound TBM transit and a total absolute settlement of -13.5mm settlement after the westbound TBM transit. A total absolute settlement of -14.1mm was recorded after CP9 works.

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

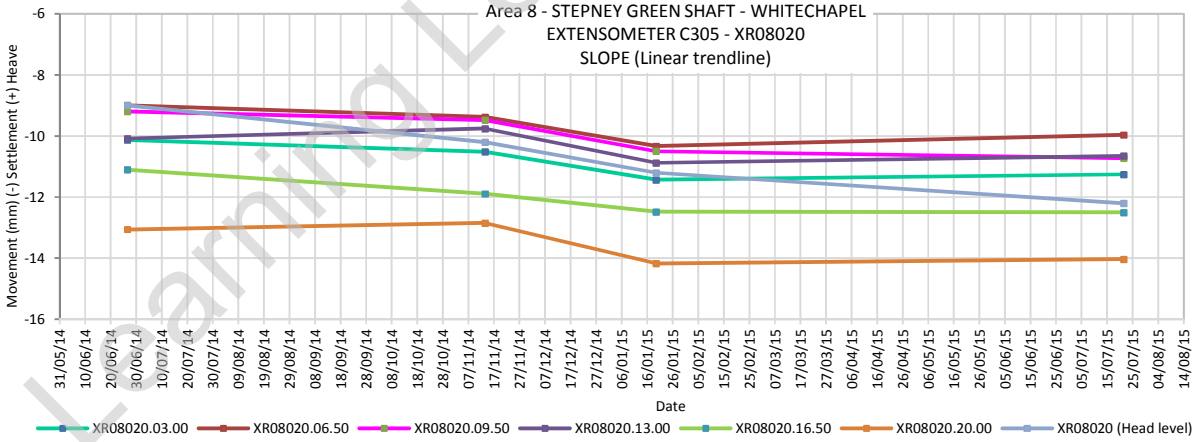
The table below shows the annual rate for each rod extensometer and head level.

	Registered Movement (mm)				Rate (mm/year)
	26/06/2014	13/11/2014	19/01/2015	21/07/2015	
C305-XR08020.03.00	-10.13	-10.52	-11.43	-11.26	-1.135
C305-XR08020.06.50	-9.00	-9.38	-10.33	-9.96	-0.978
C305-XR08020.09.50	-9.19	-9.48	-10.50	-10.72	-1.538
C305-XR08020.13.00	-10.08	-9.76	-10.88	-10.65	-0.693
C305-XR08020.16.50	-11.10	-11.89	-12.48	-12.50	-1.318
C305-XR08020.20.00	-13.06	-12.85	-14.17	-14.03	-1.085
C305-XR08020 (Head level)	-9.00	-10.20	-11.20	-12.20	-3.037
	Rate less than -2.5mm/year		% less 2mm/ year		85.71%
	Rate greater than -3.5mm/year		% less 3mm/ year		100.00%

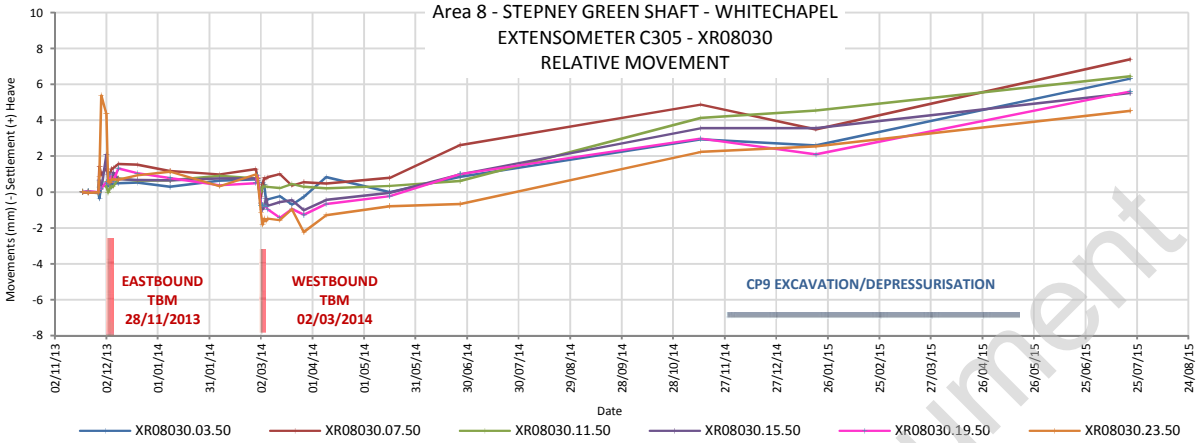
Note: All the movements are in mm. (-) Settlement / (+) Heave

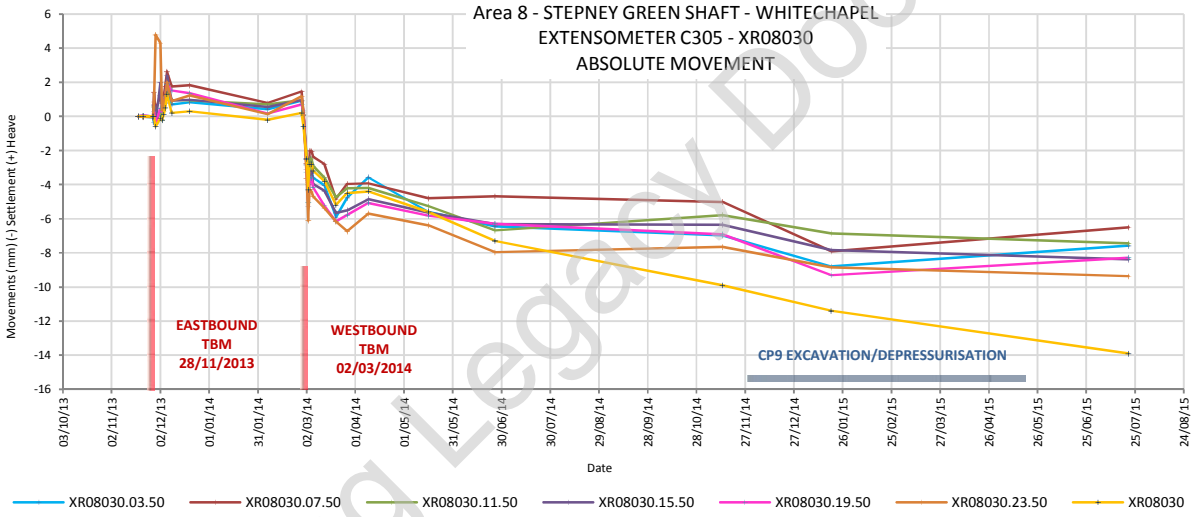
The percentage with a settlement rate less than 2mm/year is 85.71%, whereas 100% are less than 3mm/year.

The plot below shows the trend line adjustment for the rods of this extensometer.



C305-XR08030





The graph above for extensometer C305-XR08030 shows an absolute settlement of -0.6mm after the eastbound TBM transit and a total absolute settlement of -9.9mm settlement after the westbound TBM transit. A total absolute settlement of -13.9mm was recorded after CP9 works.

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

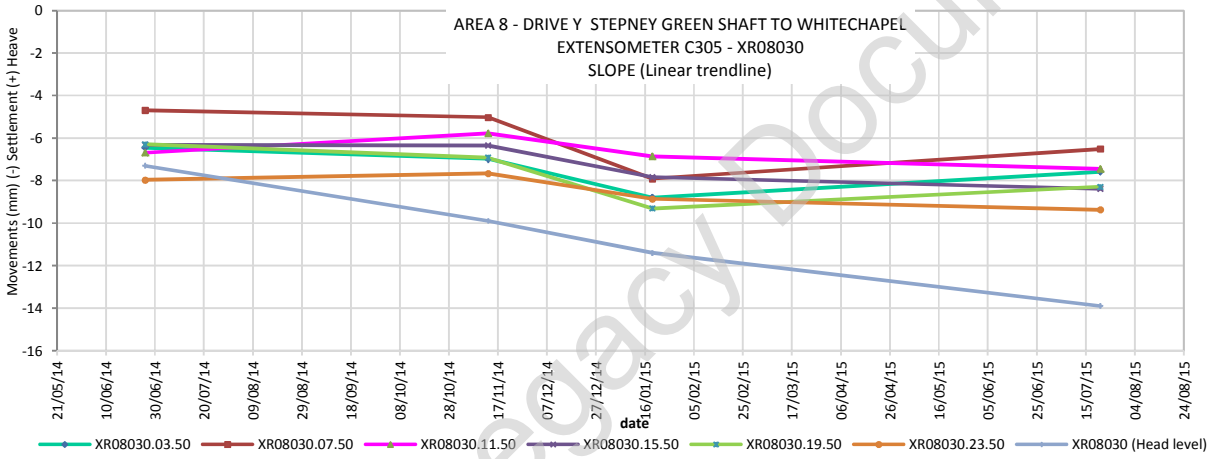
The table below shows the annual rate for each rod extensometer and head level.

	Registered Movement (mm)				Rate (mm/year)
	26/06/2014	13/11/2014	19/01/2015	21/07/2015	
C305-XR08030.03.50	-6.45	-6.97	-8.80	-7.58	-1.219
C305-XR08030.07.50	-4.69	-5.02	-7.91	-6.51	-2.007
C305-XR08030.11.50	-6.69	-5.78	-6.86	-7.45	-0.929
C305-XR08030.15.50	-6.32	-6.35	-7.84	-8.39	-2.128
C305-XR08030.19.50	-6.30	-6.92	-9.31	-8.29	-2.088
C305-XR08030.23.50	-7.97	-7.66	-8.86	-9.37	-1.492
C305-XR08030 (Head level)	-7.30	-9.90	-11.40	-13.90	-6.193
	Rate less than -2.5mm/year		% less 2mm/ year		85.71%
	Rate greater than -3.5mm/year		% less 3mm/ year		85.71%

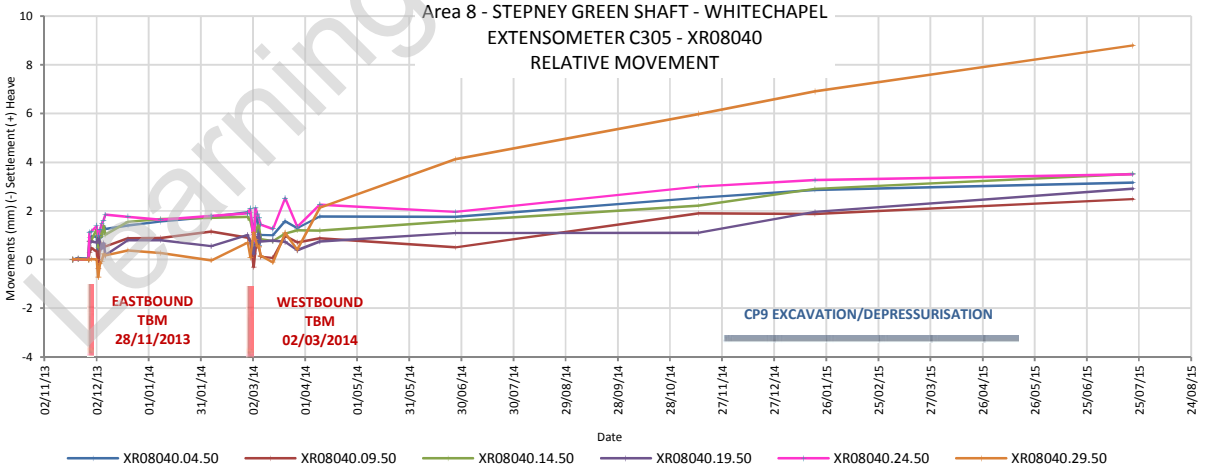
Note: All the movements are in mm. (-) Settlement / (+) Heave

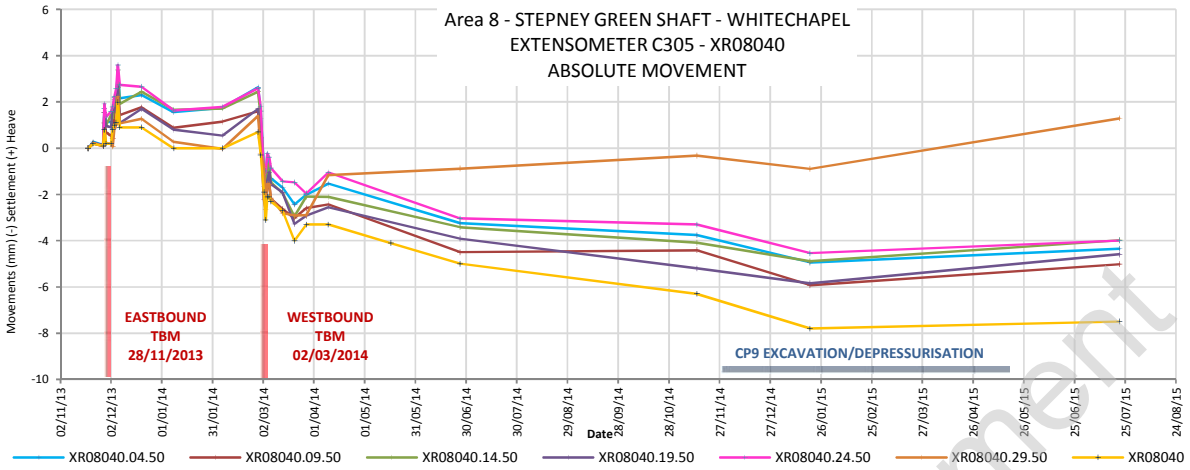
The percentage with a settlement rate less than 2mm/year and 3mm/year is 85.71% .

The plot below shows the trend line adjustment for the rods of this extensometer.



C305-XR08040





The graph above for extensometer C305-XR08040 shows a maximum absolute heave of +3.6mm after the eastbound TBM transit and a total absolute settlement of -6.3mm settlement after the westbound TBM transit. A total absolute settlement of -7.8mm was recorded after CP9 works.

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

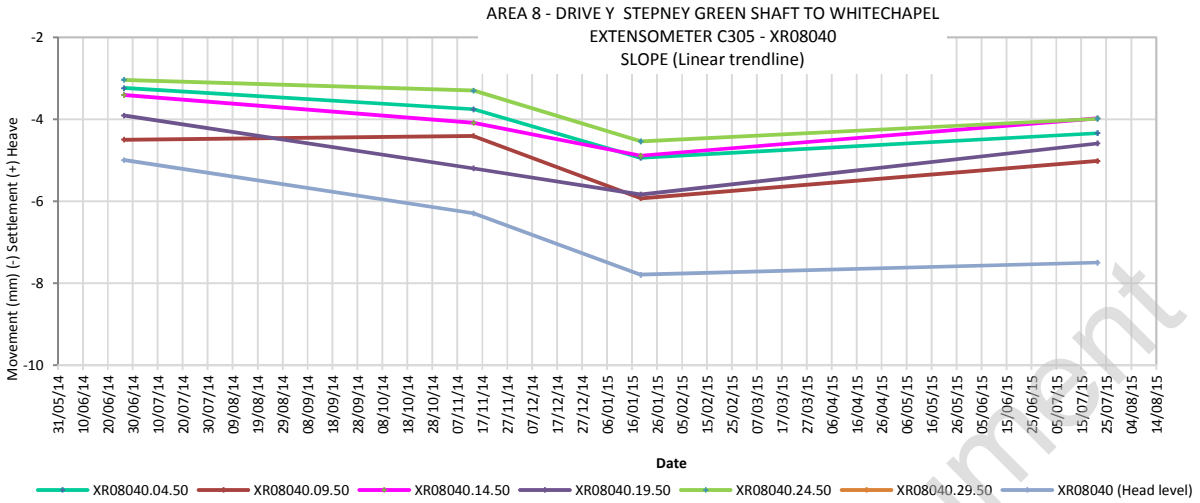
The table below shows the annual rate for each rod extensometer and head level.

	Registered Movement (mm)				Rate (mm/year)
	26/06/2014	13/11/2014	19/01/2015	21/07/2015	
C305-XR08040.04.50	-3.24	-3.76	-4.94	-4.34	-1.122
C305-XR08040.09.50	-4.50	-4.41	-5.93	-5.02	-0.665
C305-XR08040.14.50	-3.41	-4.09	-4.89	-3.98	-0.560
C305-XR08040.19.50	-3.91	-5.20	-5.84	-4.59	-0.587
C305-XR08040.24.50	-3.04	-3.30	-4.54	-3.99	-1.011
C305-XR08040.29.50	-0.88	-0.32	-0.89	1.29	1.953
C305-XR08040 (Head level)	-5.00	-6.30	-7.80	-7.50	-2.413
	Rate less than -2.5mm/year		% less 2mm/ year		100.00%
	Rate greater than -3.5mm/year		% less 3mm/ year		100.00%

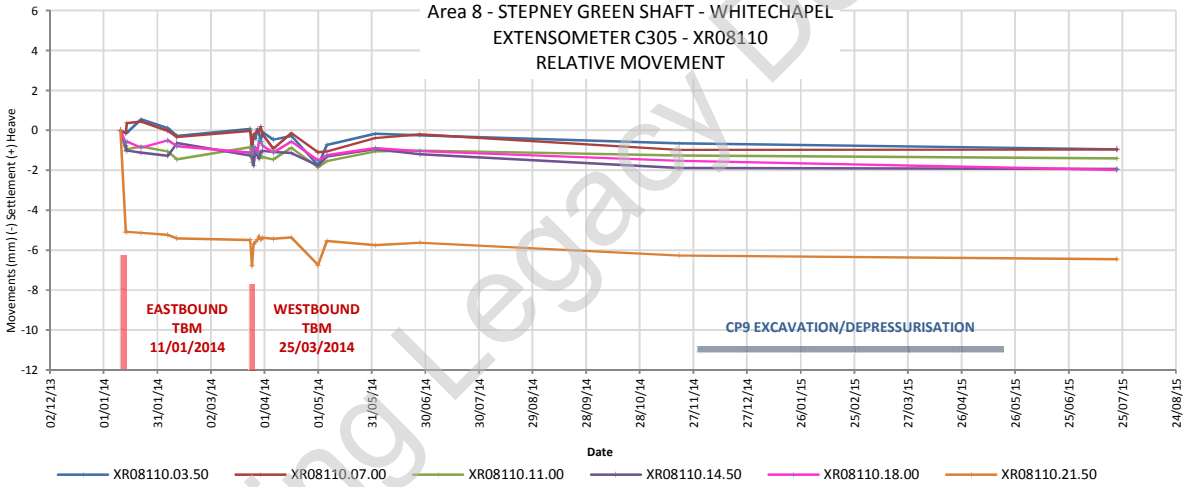
Note: All the movements are in mm. (-) Settlement / (+) Heave

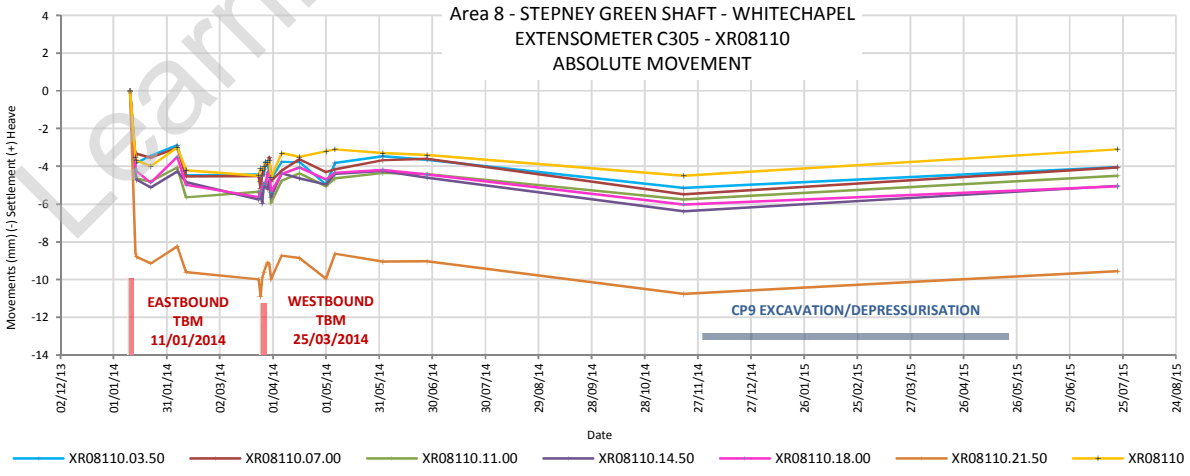
The percentage of rod sensors with a settlement rate less than 2mm/year is 100%.

The plot below shows the trend line adjustment for the rods of this extensometer.



C305-XR08110





The graph above for extensometer C305-XR08110 shows an absolute settlement of -9.6mm after the eastbound TBM transit and a total absolute settlement of -10.9mm settlement after the westbound TBM transit. A total absolute settlement of -9.5mm was recorded after CP9 works.

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

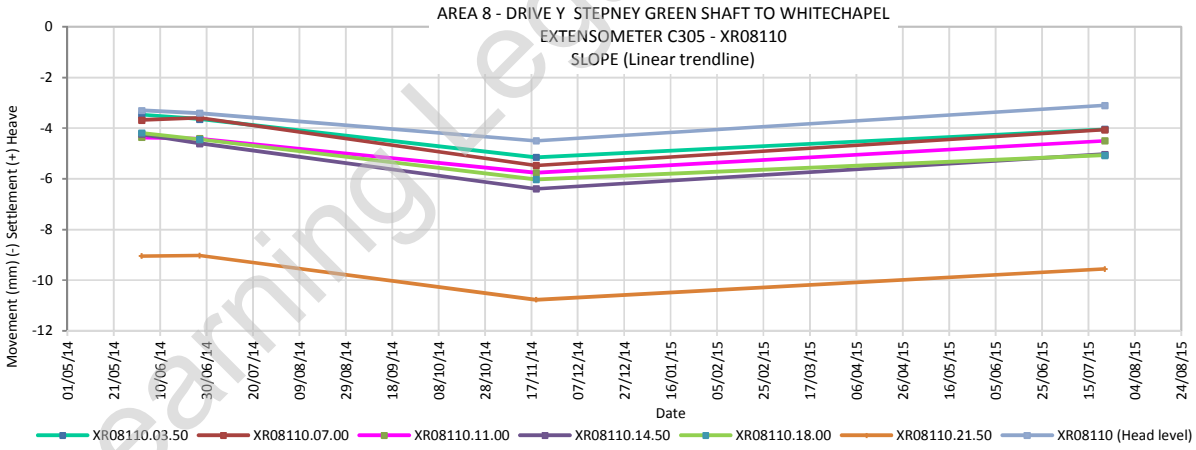
The table below shows the annual rate for each rod extensometer and head level.

	Registered Movement (mm)				Rate (mm/year)
	02/06/2014	27/06/2014	19/11/2014	22/07/2015	
C305-XR08110.03.50	-3.47	-3.64	-5.15	-4.04	-0.528
C305-XR08110.07.00	-3.68	-3.59	-5.47	-4.06	-0.479
C305-XR08110.11.00	-4.36	-4.41	-5.76	-4.50	-0.184
C305-XR08110.14.50	-4.24	-4.60	-6.39	-5.03	-0.668
C305-XR08110.18.00	-4.19	-4.44	-6.02	-5.07	-0.776
C305-XR08110.21.50	-9.05	-9.03	-10.77	-9.56	-0.559
C305-XR08110 (Head level)	-3.30	-3.40	-4.50	-3.10	0.149
	Rate less than -2.5mm/year		% less 2mm/ year		100.00%
	Rate greater than -3.5mm/year		% less 3mm/ year		100.00%

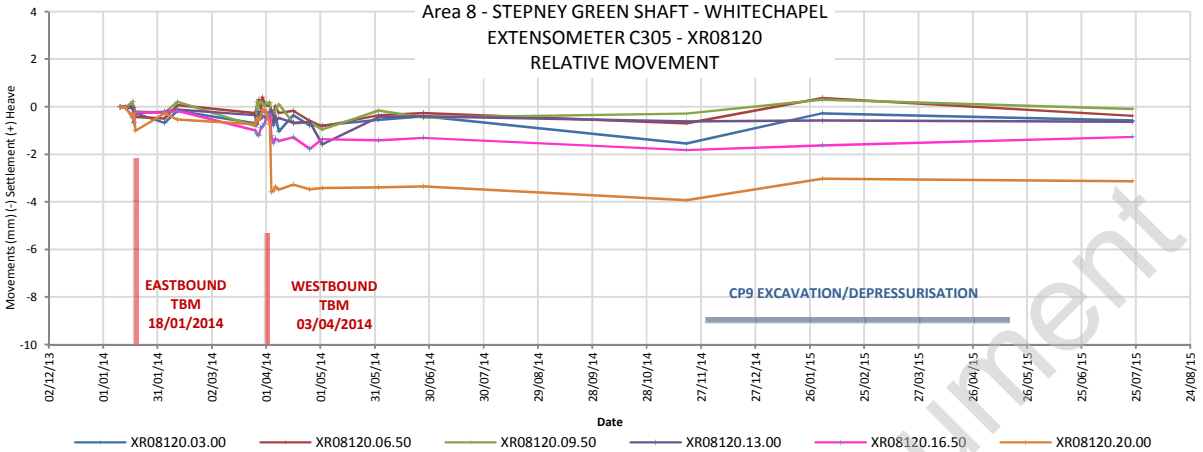
Note: All the movements are in mm. (-) Settlement / (+) Heave

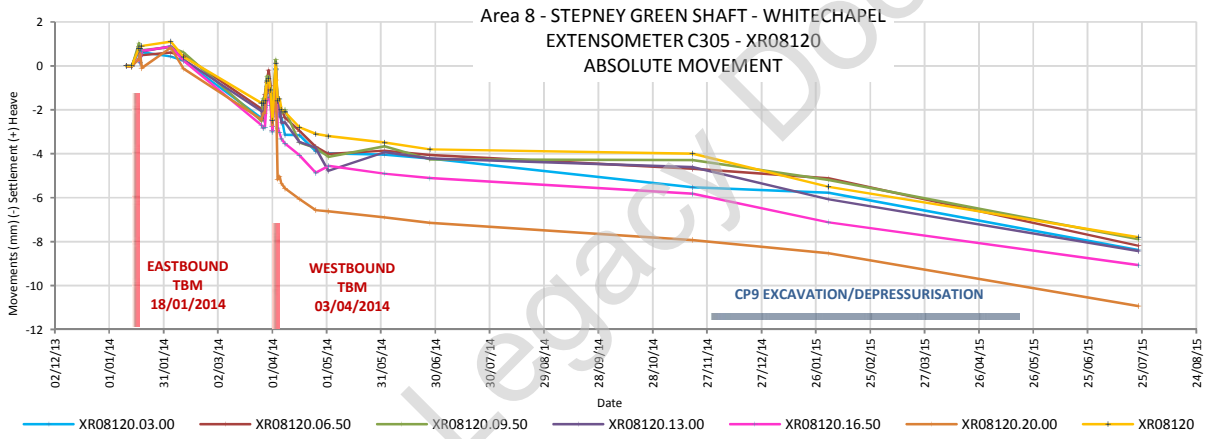
The percentage of rod sensors with a settlement rate less than 2mm/year is 100%.

The plot below shows the trend line adjustment for the rods of this extensometer.



C305-XR08120





The graph above for extensometer C305-XR08120 shows an absolute settlement of -0.1mm and a heave of+ 1.1mm after the eastbound TBM transit and a total absolute settlement of -7.9mm settlement after the westbound TBM transit. A total absolute settlement of -10.9mm was recorded after CP9 works.

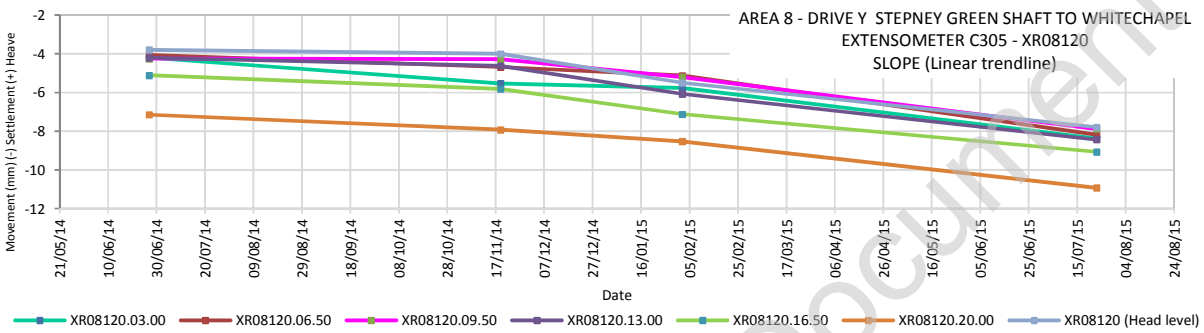
To analyse whether the rate of change in the data has reached an acceptably small rate, the last four readings were used to calculate the annual projection.
The table below shows the annual rate for each rod extensometer and head level.

	Registered Movement (mm)				Rate (mm/year)
	27/06/2014	19/11/2014	02/02/2015	23/07/2015	
C305-XR08120.03.00	-4.21	-5.54	-5.77	-8.38	-3.824
C305-XR08120.06.50	-4.06	-4.69	-5.13	-8.18	-3.850
C305-XR08120.09.50	-4.26	-4.29	-5.20	-7.89	-3.498
C305-XR08120.13.00	-4.21	-4.62	-6.08	-8.43	-4.101
C305-XR08120.16.50	-5.11	-5.82	-7.12	-9.07	-3.819
C305-XR08120.20.00	-7.15	-7.93	-8.53	-10.93	-3.548
C305-XR08120 (Head level)	-3.80	-4.00	-5.50	-7.80	-3.915
	Rate less than -2.5mm/year		% less 2mm/ year		0.00%
	Rate greater than -3.5mm/year		% less 3mm/ year		14.29%

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

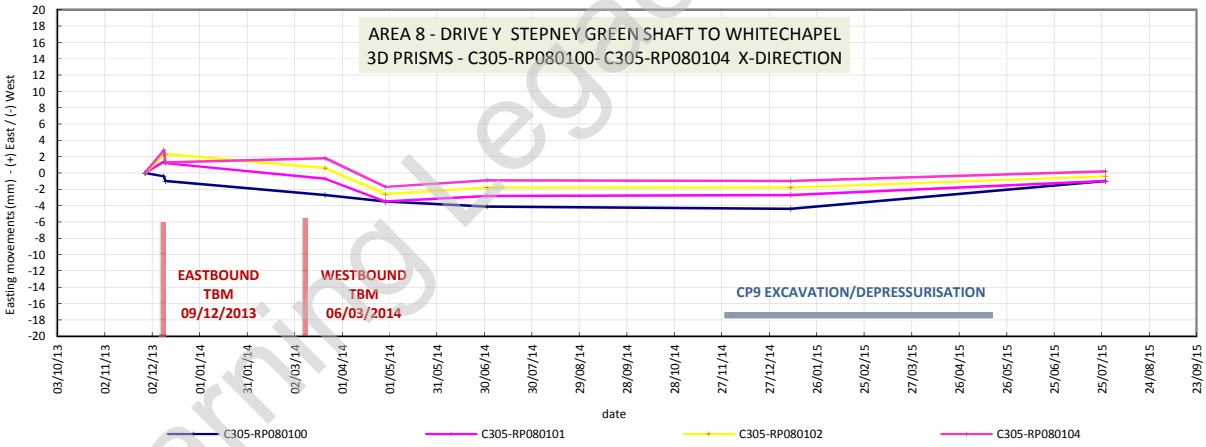
The percentage of with a settlement rate less than 2mm/year is 0%, whereas 14.29% are less than 3mm/year. NOTE: This instrument is close to the Whitechapel station westbound SCL reception chamber (approx. 25m) and that station excavation works may have affected the settlement, and hence rate, recorded by the instrument.

The plot below shows the trend line adjustment for the rods of this extensometer.

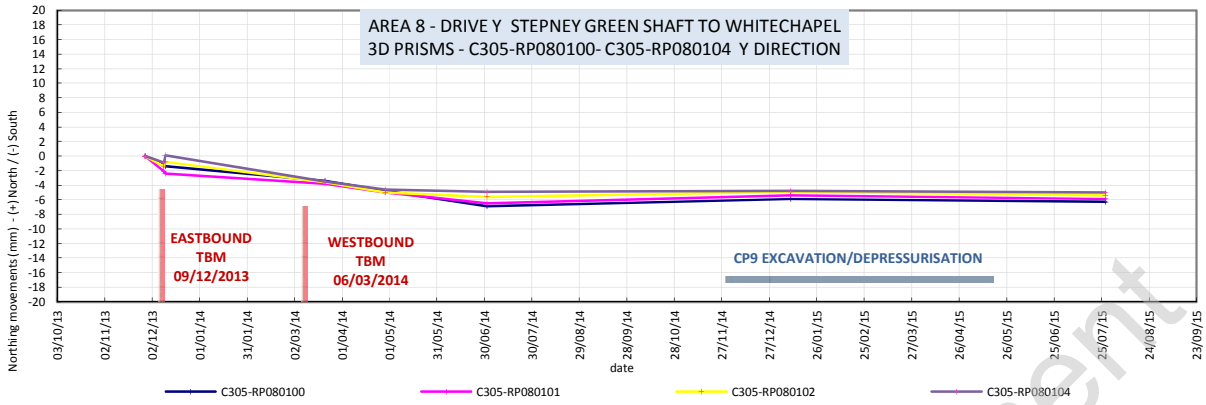


3D PRISMS & RETRO TARGETS

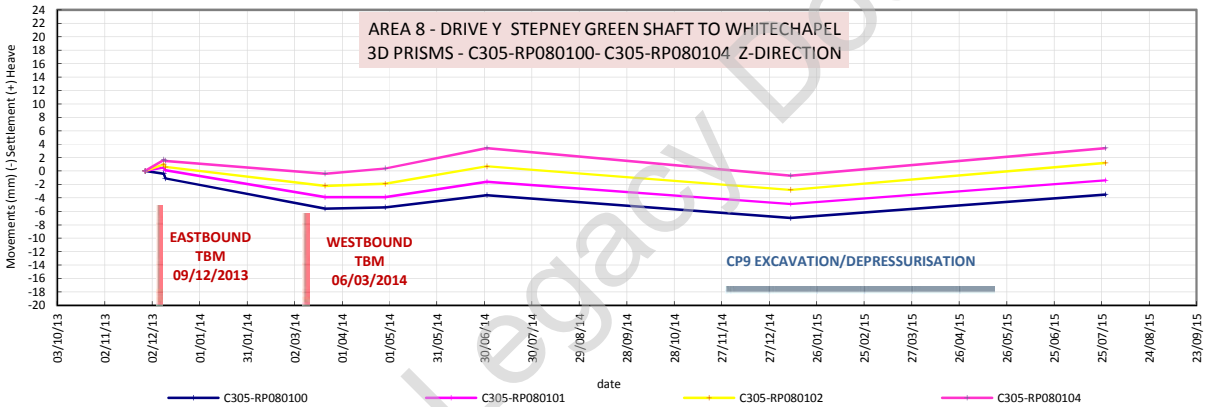
C305-RP080100 – C305-RP80104



The X axis shows a maximum movement range between +2.8mm and -1mm after the eastbound TBM transit and a maximum movement range between +1.8mm and -4.1mm after the westbound TBM transit. A maximum movement range of between +0.2mm and -4.4mm was recorded after CP9 works.

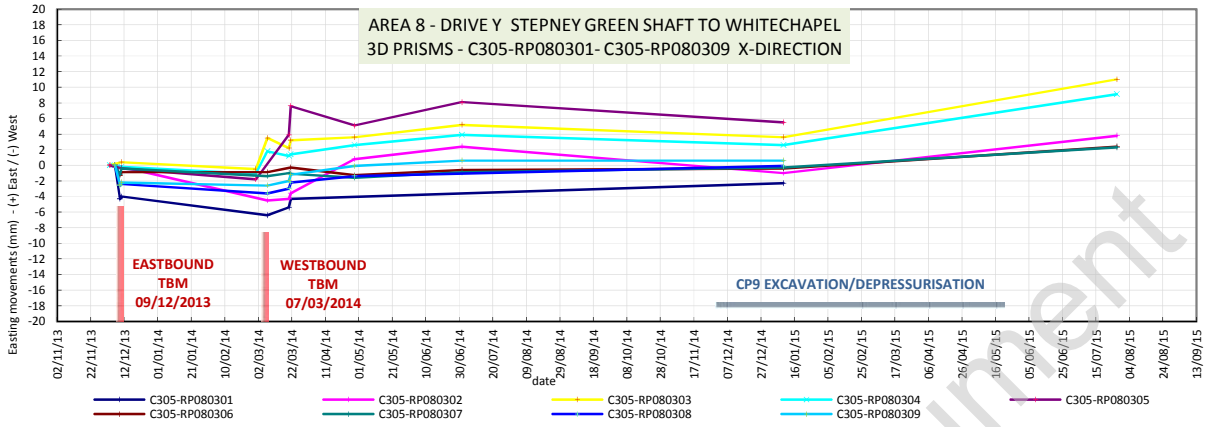


The Y axis shows a maximum movement range between +0.1mm and -2.4mm after the eastbound TBM transit and a maximum movement of –6.5mm after the westbound TBM transit. A maximum movement range of between -6.5mm was recorded after CP9 works.

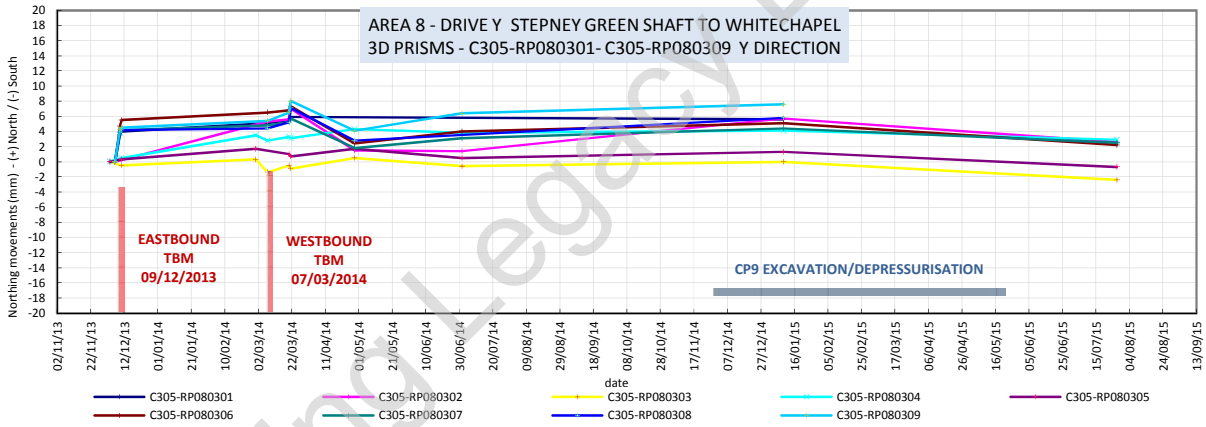


The Z axis shows a maximum movement range between +1.7mm and -1.1mm after the eastbound TBM transit and a maximum movement range between +3.4mm and –5.6mm after the westbound TBM transit. A maximum movement range of between +3.4mm and -7mm was recorded after CP9 works.

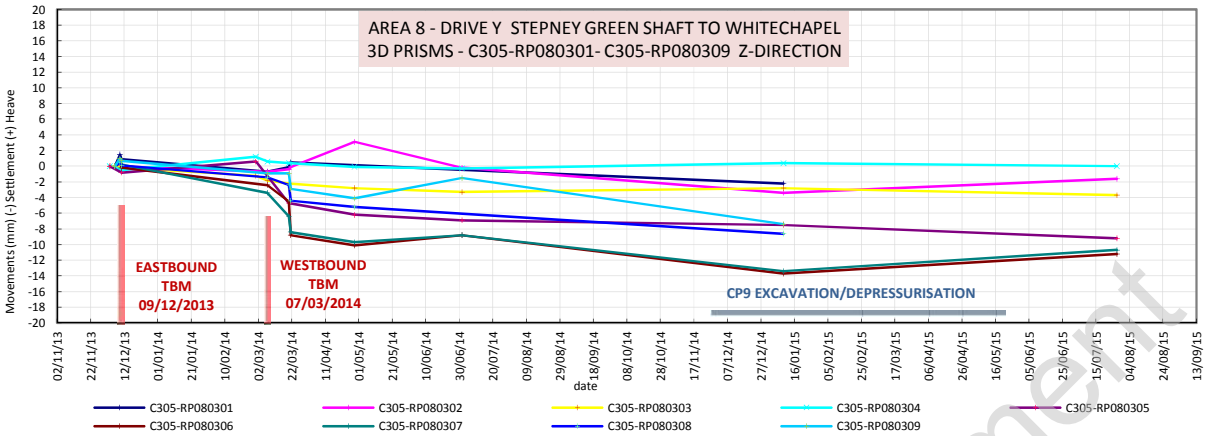
C305-RP080301 – C305-RP080309



The X axis shows a maximum movement of -4.3mm after the eastbound TBM transit and a maximum movement range between +8.1mm and -6.4mm after the westbound TBM transit. A maximum movement range of between +11mm and -2.3mm was recorded after CP9 works.

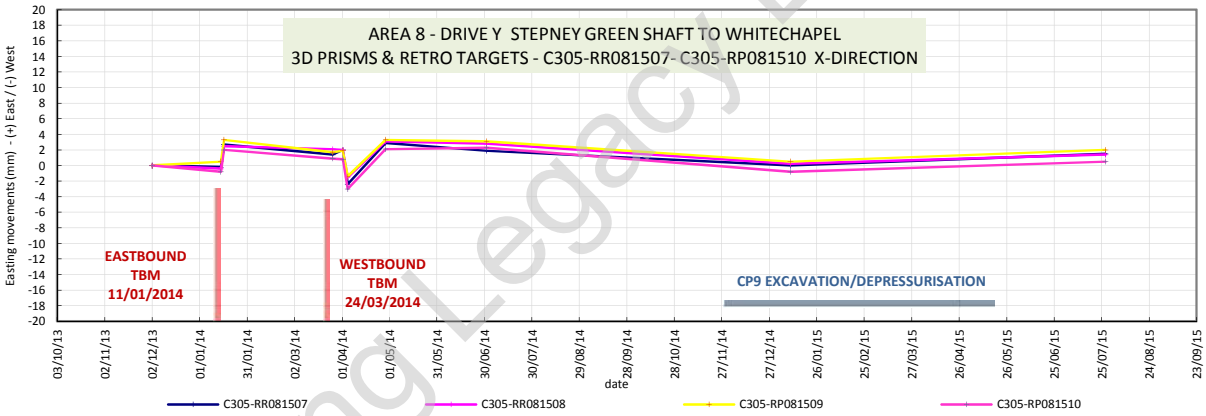


The Y axis shows a maximum movement of +4.3mm after the eastbound TBM transit and a maximum movement range between +8mm and -1.4mm after the westbound TBM transit. A maximum movement range of between +7.6mm and -2.4mm was recorded after CP9 works.

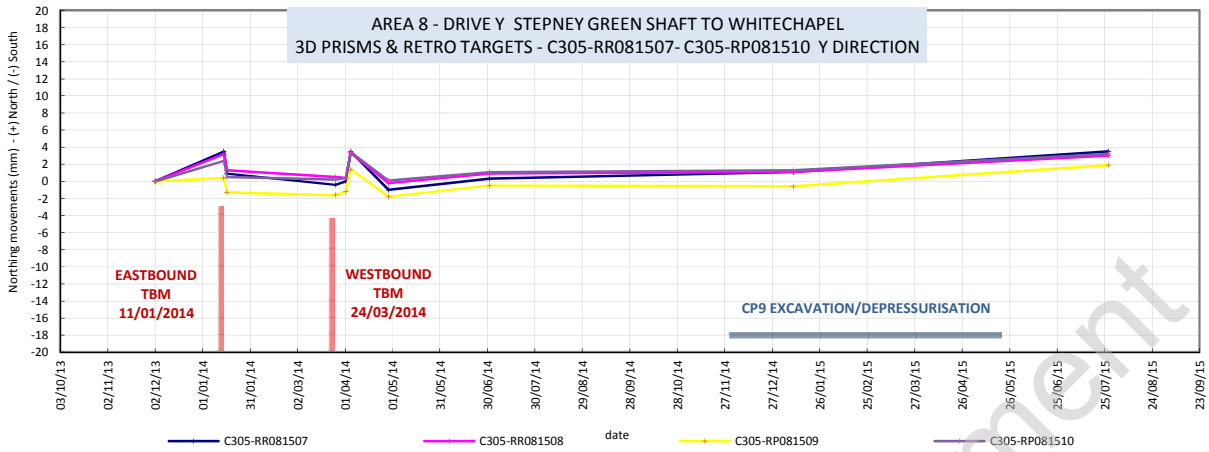


The Z axis shows a maximum movement range of -0.8mm and +1mm after the eastbound TBM transit and a maximum movement range between +3.1mm and -9.7mm after the westbound TBM transit. A maximum movement range of between +0.4mm and -13.7mm was recorded after CP9 works.

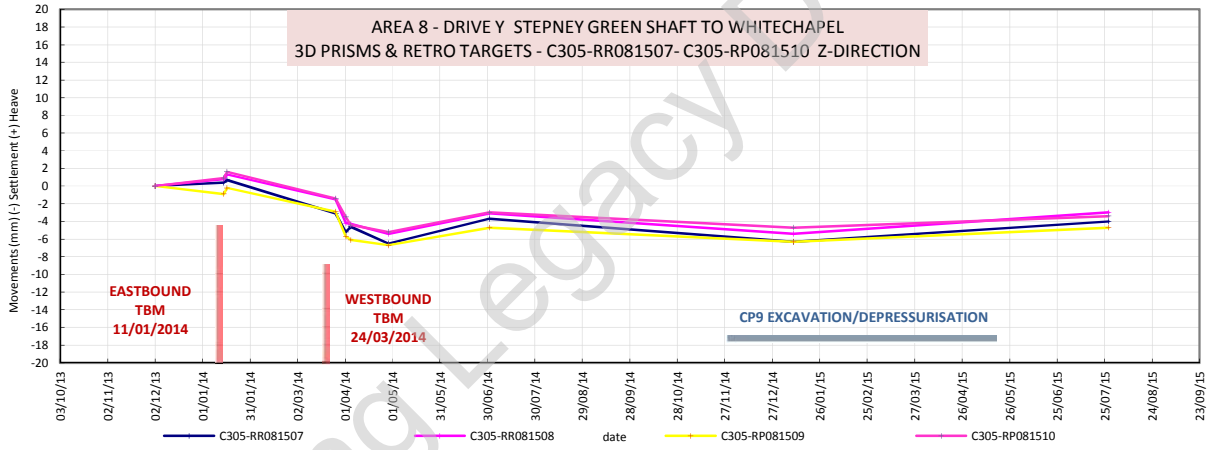
C305-RR081507-C305-RR081508 & C305-RP81509 -C305-RP81510



The X axis shows a maximum movement range +3.3mm and -0.8mm after the eastbound TBM transit and a maximum movement range between +3.3mm and -3mm after the westbound TBM transit. A maximum movement range of between +2mm and -0.8mm was recorded after CP9 works.

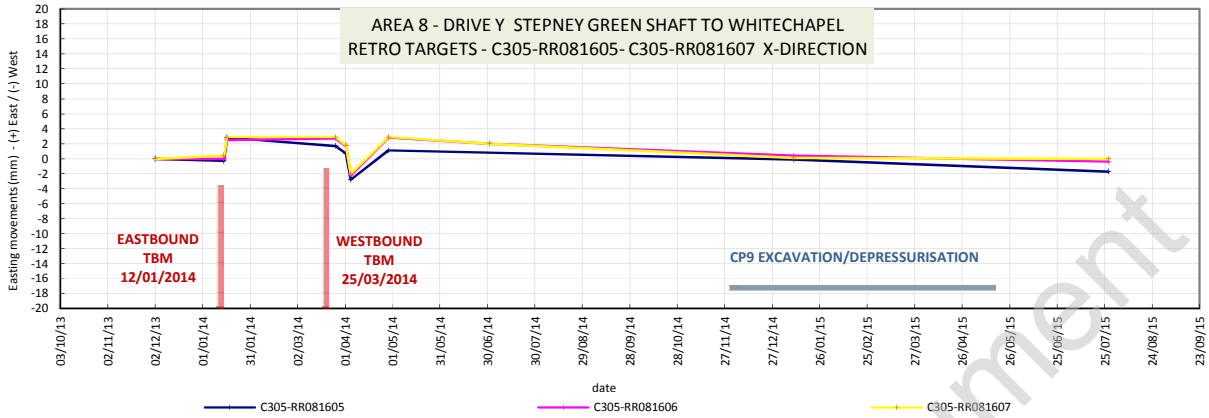


The Y axis shows a maximum movement range +3.2mm and -1.3mm after the eastbound TBM transit and a maximum movement range between +3.4mm and -1.8mm after the westbound TBM transit. A maximum movement range of between +3.2mm and -0.6mm was recorded after CP9 works.

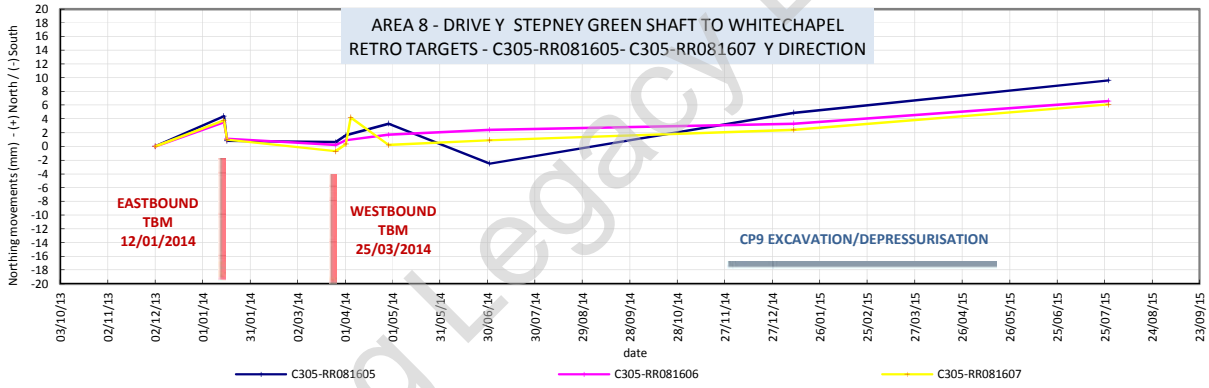


The Z axis shows a maximum movement range +1.6mm and -0.9mm after the eastbound TBM transit and a maximum movement range between -3mm and -6.7mm after the westbound TBM transit. A maximum movement range of between -3.4mm and -6.3mm was recorded after CP9 works.

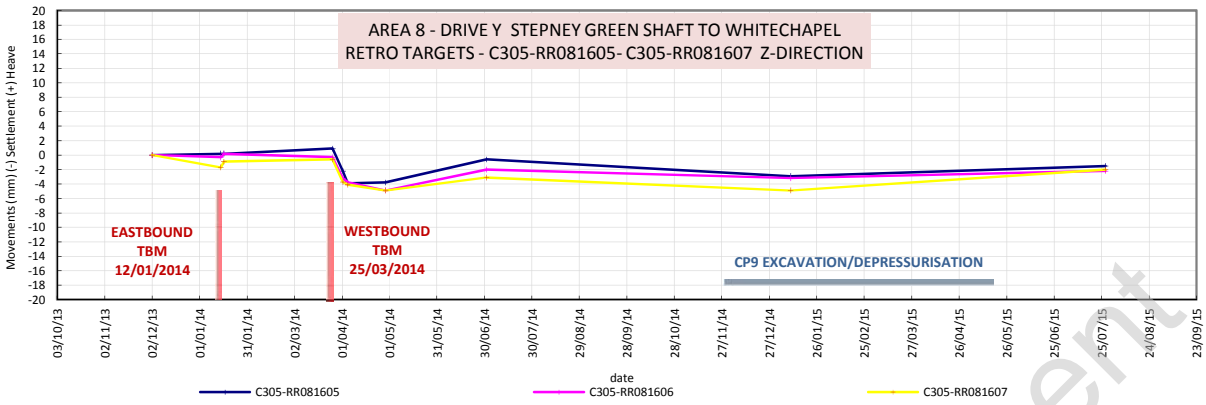
C305-RR081605 – C305-RR81607



The X axis shows a maximum movement range +2.9mm and 0mm after the eastbound TBM transit and a maximum movement range between +2.9mm and -2.8mm after the westbound TBM transit. A maximum movement of -1.7mm was recorded after CP9 works.

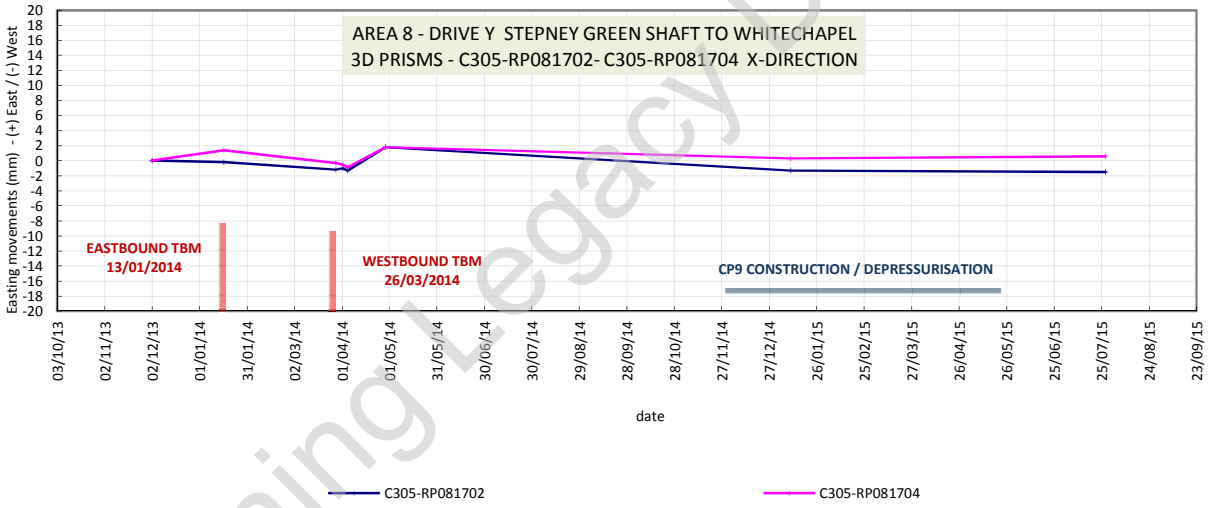


The Y axis shows a maximum movement of +4.4mm mm after the eastbound TBM transit and a maximum movement range between +4.2mm and -2.5mm after the westbound TBM transit. A maximum movement range of between +2.4mm and +9.6mm was recorded after CP9 works.

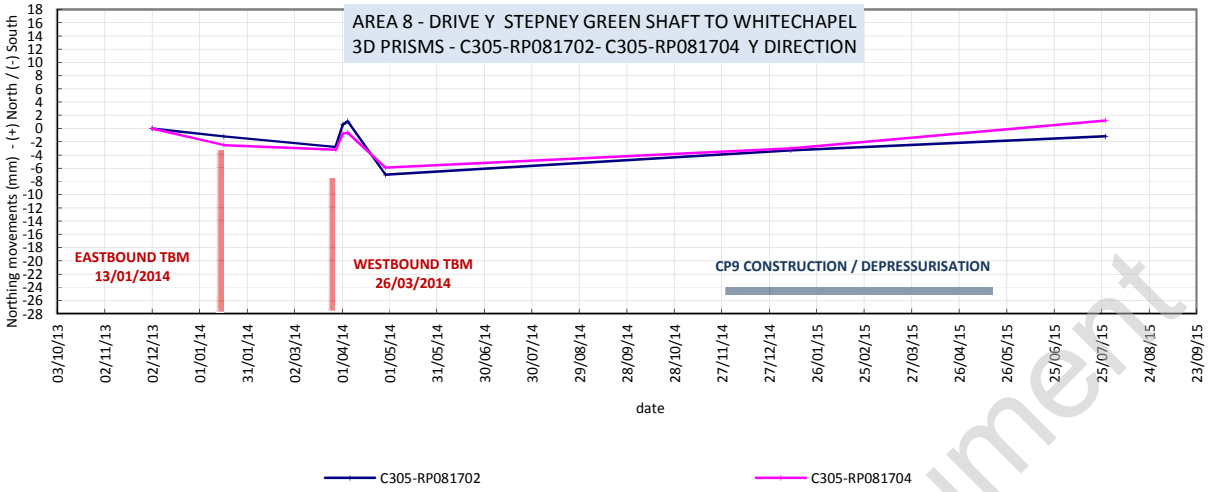


The Z axis shows a maximum movement range +0.2mm and -1.7mm after the eastbound TBM transit and a maximum movement range between +0.9mm and -4.9mm after the westbound TBM transit. A maximum movement of -4.9mm was recorded after CP9 works.

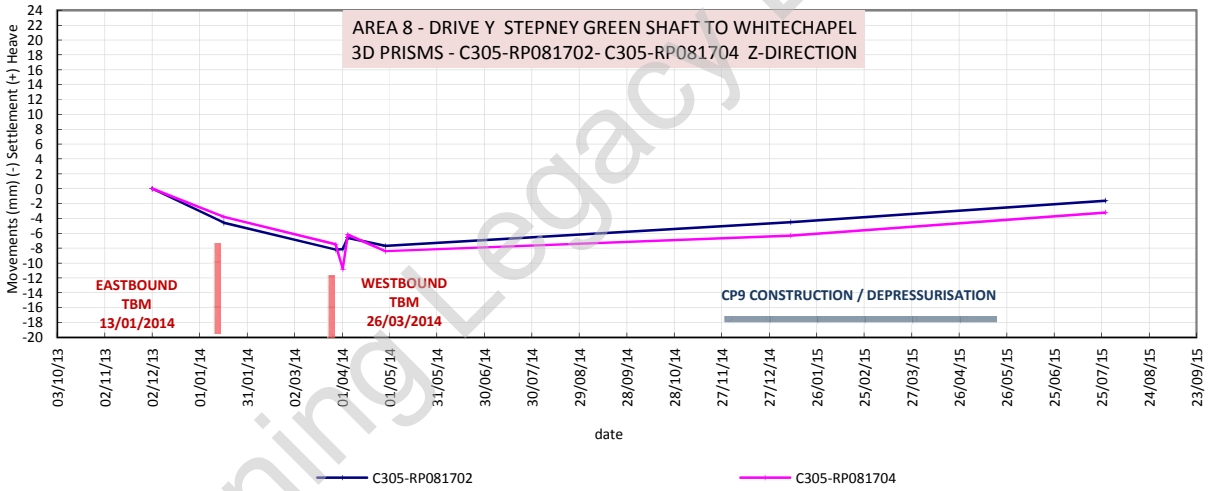
C305-RP081702 – C305-RP081704



The X axis shows a maximum movement range +1.4mm and -0.2mm after the eastbound TBM transit and a maximum movement range between +1.8mm and -1.3mm after the westbound TBM transit. A maximum movement range of between +0.6mm and -1.5mm was recorded after CP9 works.

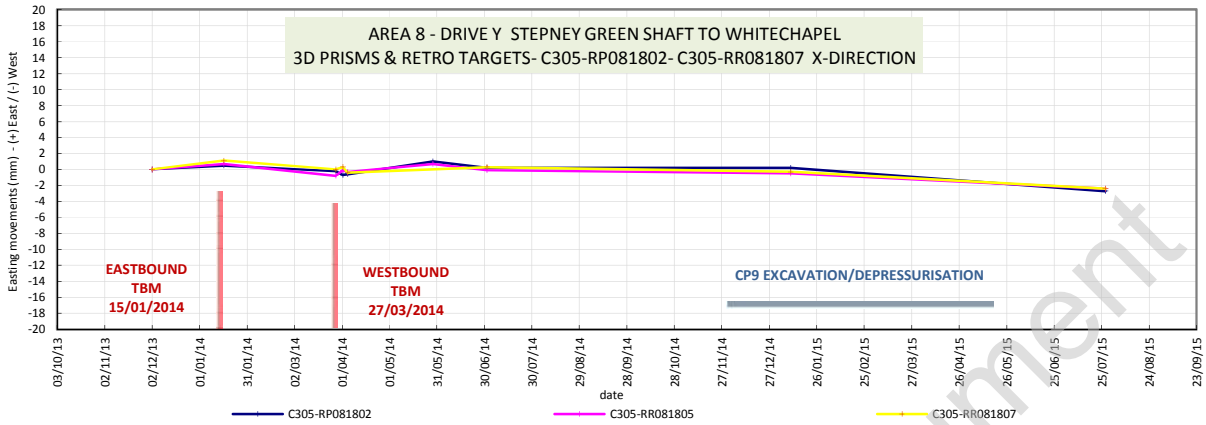


The Y axis shows a maximum movement of -2.5mm after the eastbound TBM transit and a maximum movement range between +1.1mm and -7mm after the westbound TBM transit. A maximum movement range of between +1.2mm and -3mm was recorded after CP9 works.

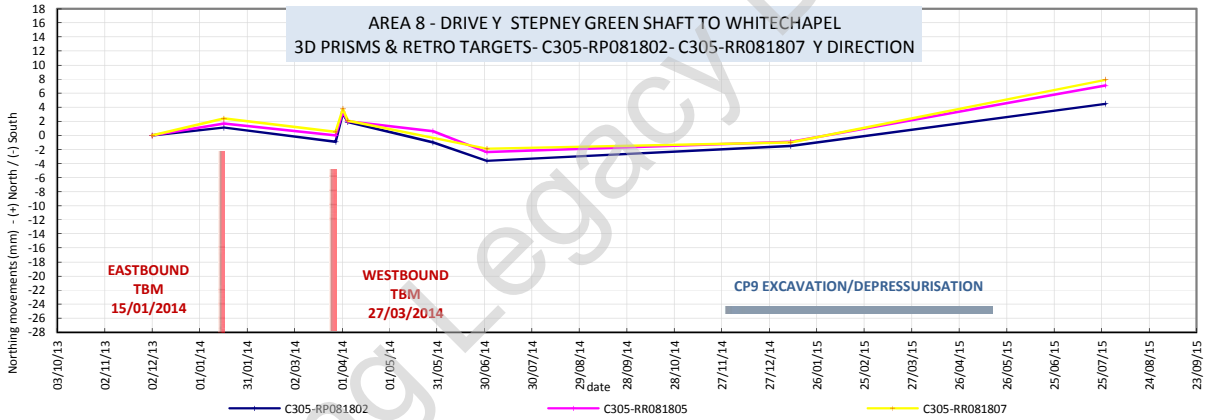


The Z axis shows a maximum movement of -4.6mm after the eastbound TBM transit and a maximum movement range between -6.2mm and -10.8mm after the westbound TBM transit. A maximum movement range of between -1.6mm and -6.3mm was recorded after CP9 works. Although some of the sockets and LPs in the vicinity do not reflect this trend, the graph above shows the almost complete recovery in settlement data from January 2015 onwards.

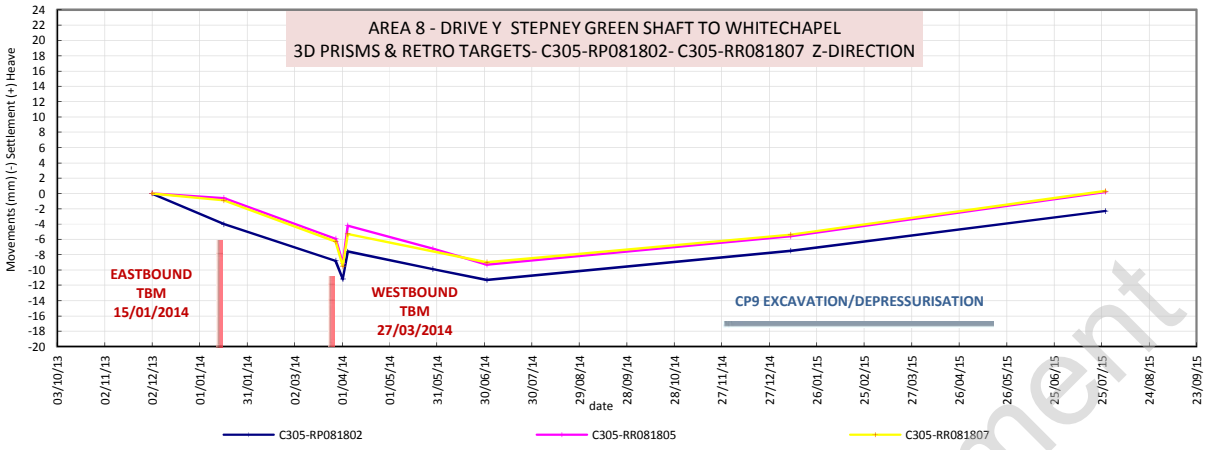
C305-RP081802, C305-RR081805 & C305-RR081807



The X axis shows a maximum movement of +1.1mm after the eastbound TBM transit and a maximum movement range between +0.7mm and -0.4mm after the westbound TBM transit. A maximum movement range of between +0.2mm and -2.4mm was recorded after CP9 works.



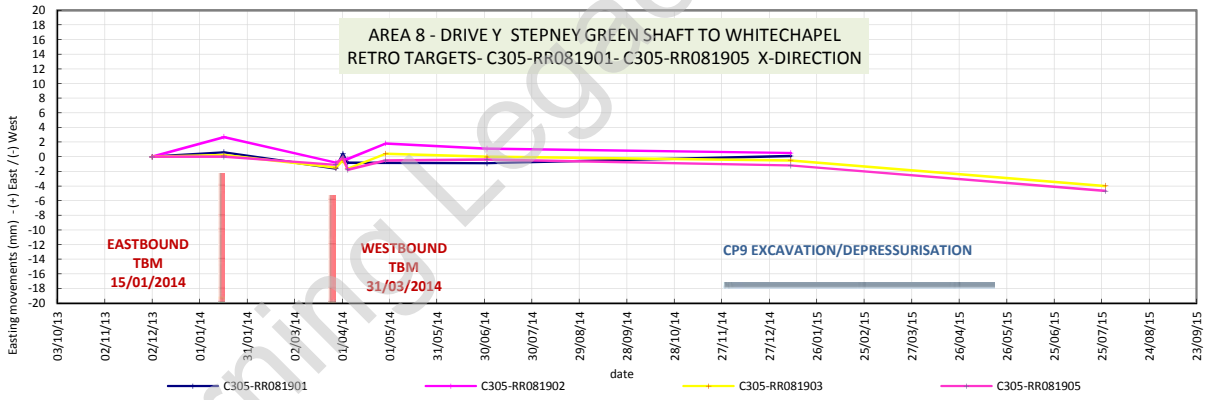
The Y axis shows a maximum movement of +2.4mm after the eastbound TBM transit and a maximum movement range between +3.8mm and -3.6mm after the westbound TBM transit. A maximum movement of between +7.9mm was recorded after CP9 works.



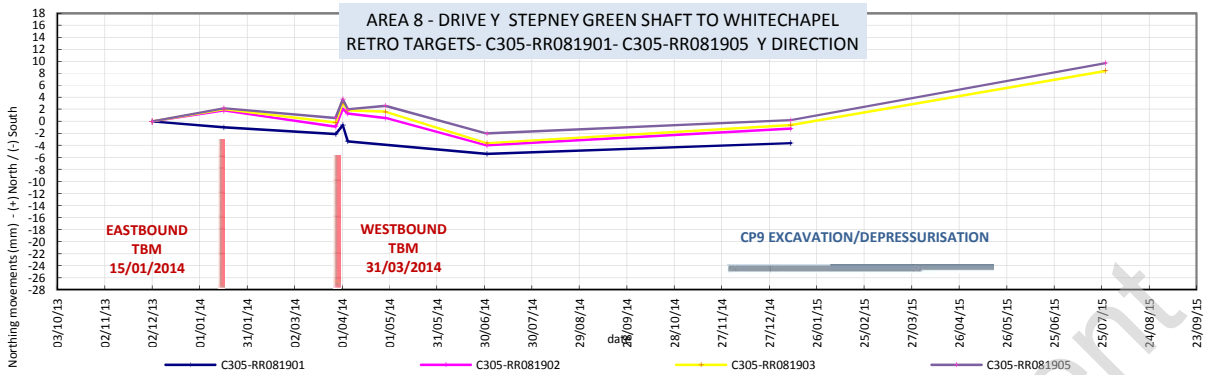
The Z axis shows a maximum movement range -0.9mm and -4mm after the eastbound TBM transit and a maximum movement range between -5.3mm and -11.2mm after the westbound TBM transit. A maximum movement range of between +0.3mm and -7.5mm was recorded after CP9 works.

Although some of the sockets and LPs in the vicinity do not reflect this trend, the graph above shows the almost complete recovery in settlement data from January 2015 onwards.

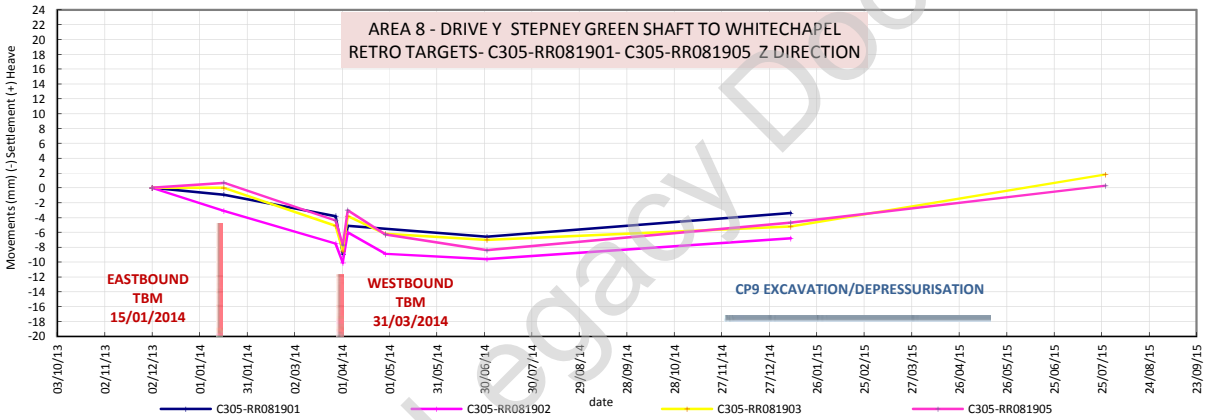
C305-RR081901 – C305-RR081905



The X axis shows a maximum movement of +2.7mm after the eastbound TBM transit and a maximum movement range between +1.8mm and -1.8mm after the westbound TBM transit. A maximum movement range of between +0.5mm and -4.7mm was recorded after CP9 works.



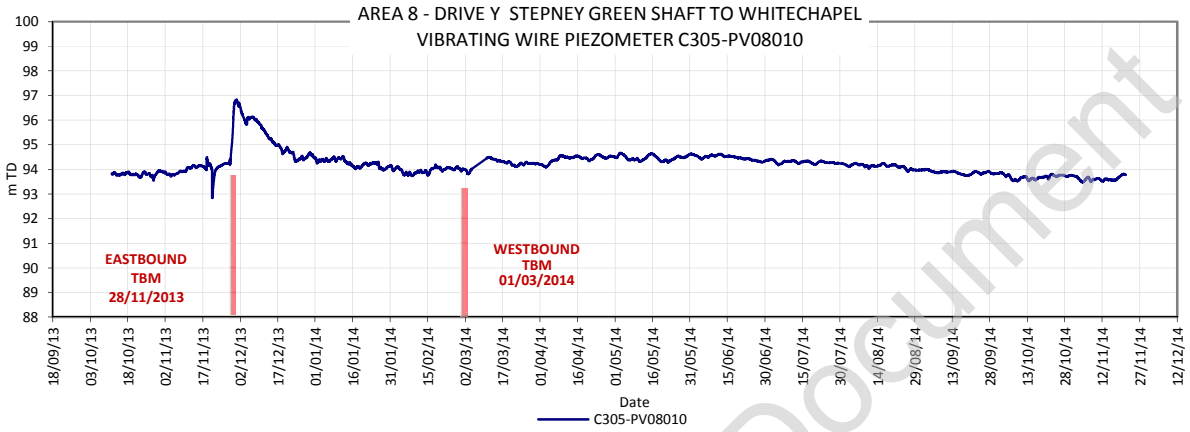
The Y axis shows a maximum movement range +2.2mm and -1mm after the eastbound TBM transit and a maximum movement range between +3.7mm and -5.4mm after the westbound TBM transit. A maximum movement range of between +9.7mm and -3.6mm was recorded after CP9 works.



The Z axis shows a maximum movement range +0.7mm and -3.1mm after the eastbound TBM transit and a maximum movement range between -3mm and -10.1mm after the westbound TBM transit. A maximum movement range of between +1.8mm and -6.8mm was recorded after CP9 works. Although some of the sockets and LPs in the vicinity do not reflect this trend, the graph above shows the almost complete recovery in settlement data from January 2015 onwards.

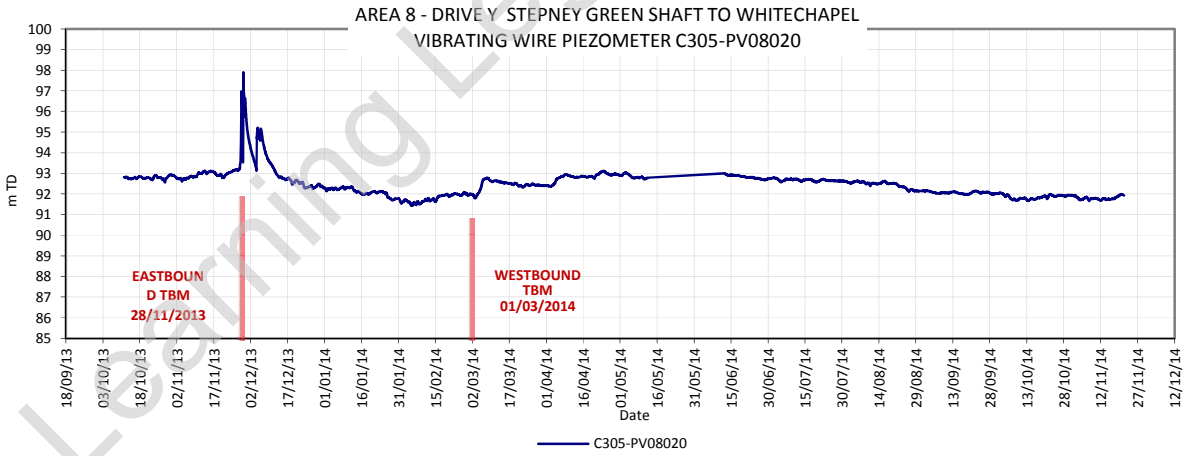
VIBRATING WIRE PIEZOMETERS

C305-PV08010



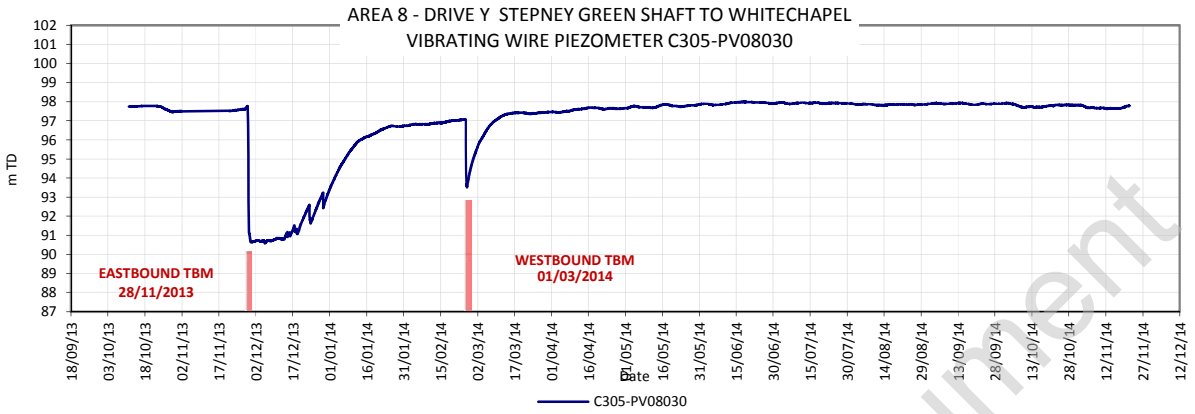
The graph above shows a rise of +2.5m in the water level after the eastbound TBM transit and 0.5m rise after the westbound TBM transit.

C305-PV08020



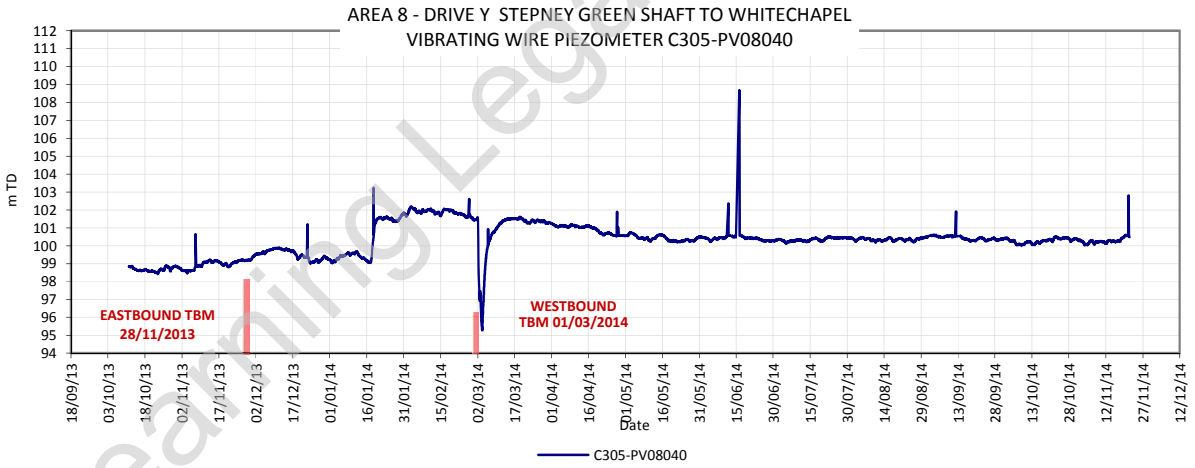
The graph above shows a rise of +4.8m in the water level after the eastbound TBM transit and +0.9m after the westbound TBM transit.

C305-PV08030



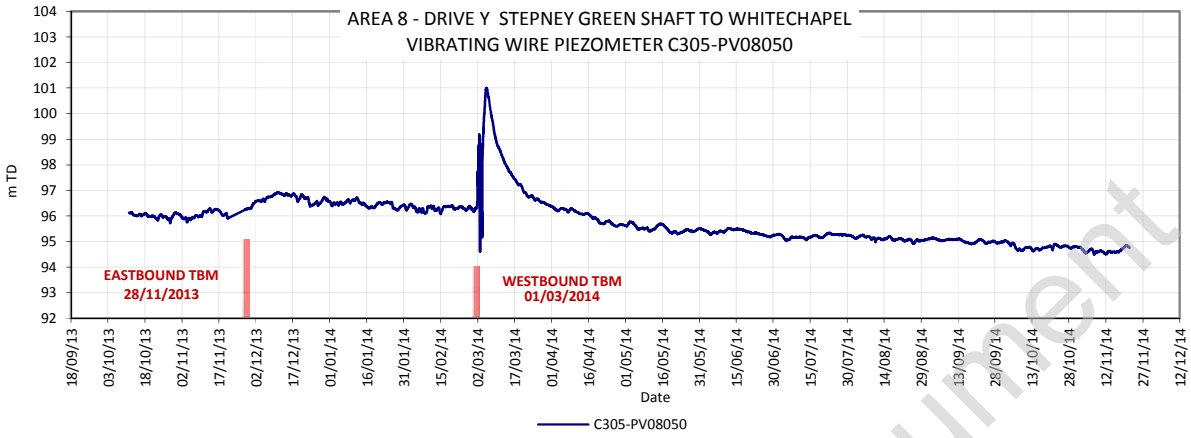
The graph above shows a drop of -7m in the water level after the eastbound TBM transit some recovery was evident over the following two month period. The water level dropped -3.5m after the westbound TBM transit and recovered over a one month period thereafter.

C305-PV08040



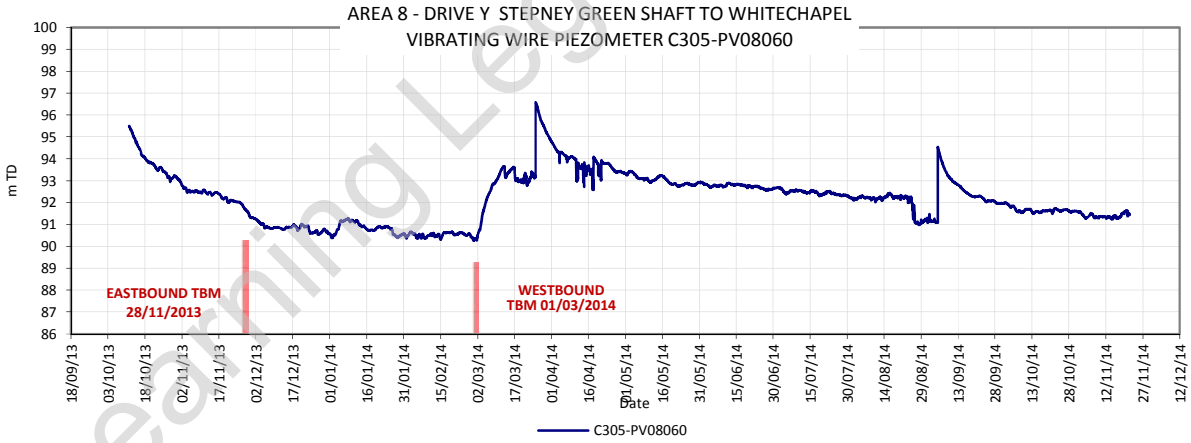
The graph above shows a rise of approximately +1m in the water level after the eastbound TBM transit and the water level droped -6m after the westbound TBM transit.

C305-PV08050



The graph above shows a rise of +0.8m in the water level after the eastbound TBM transit and +4.7m rise after the westbound TBM transit.

C305-PV08060



The graph above shows a continuous drop in the water level of -4.8m over the first two months, including the eastbound TBM transit. After the westbound TBM transit the water level was noted to rise +3.2m initially which was followed by an additional 3m rise, after which the level gradually dropped.

INCLINOMETERS

Six inclinometers were installed. The figures below show the orientation of "A" and "B" AXIS and the distance of the instrument from the nearest tunnel drive.

Movements in A+ AXIS are always towards the expected AXIS, ie: towards the tunnel AXIS, and the B+ AXIS is clockwise +90˚ from the A+ axis (see orientation sketch, below right).

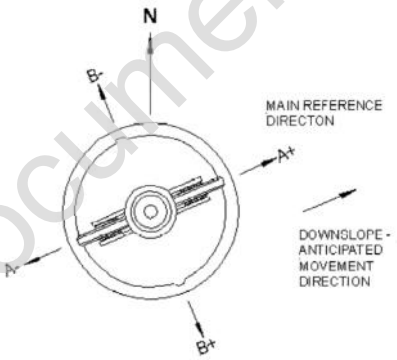
Orientation of the probe and casing:

A axis: the direction of the anticipated movement

A+ = the orientation of the casing groove into which the leading wheel of the inclinometer probe is located on the first run of a set of readings. This is also the orientation of the primary sensor

A- = the orientation of the casing groove into which the leading wheel of the inclinometer probe is located on the second run of a set of readings. This is also the orientation of the primary sensor

B+ = the orientation of the secondary sensor after the first run of a set of readings.

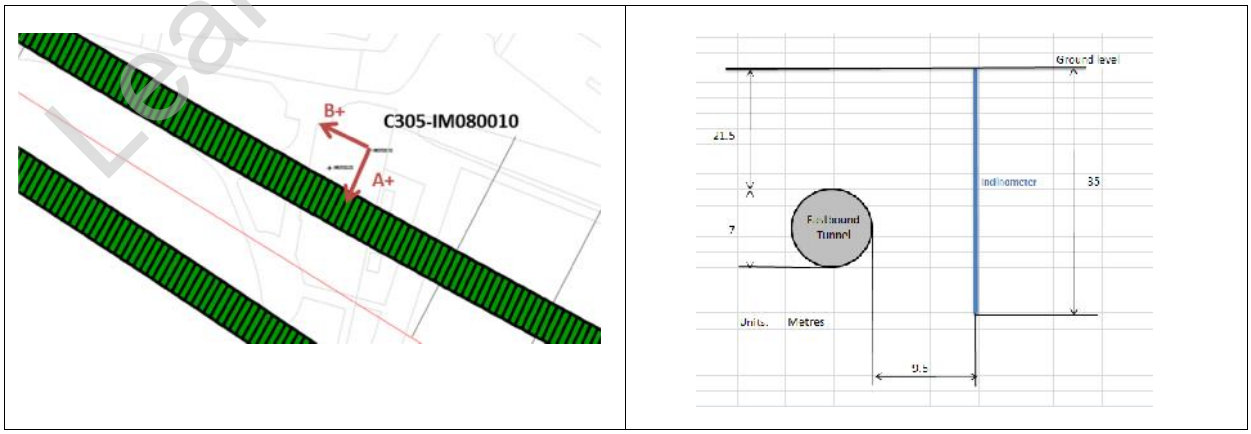


B- = the orientation of the secondary sensor after the second run of a set of readings

The first reading of the baseline was an average of the three commissioning readings taken prior baseline readings.

Corrections were applied to the raw data when using different probes. This correction was calculated thus; an average of the raw readings along the inclinometer was obtained in each case. Then the difference between the average values before and after the change of the probes was calculated. This difference was applied to the readings taken with the different probe in each direction.

C305-IM080010



The dates when the TBMs were immediately adjacent to the inclinometer are as follows:

Eastbound Drive-Y	28/11/2013
Westbound Drive-Y	02/03/2014

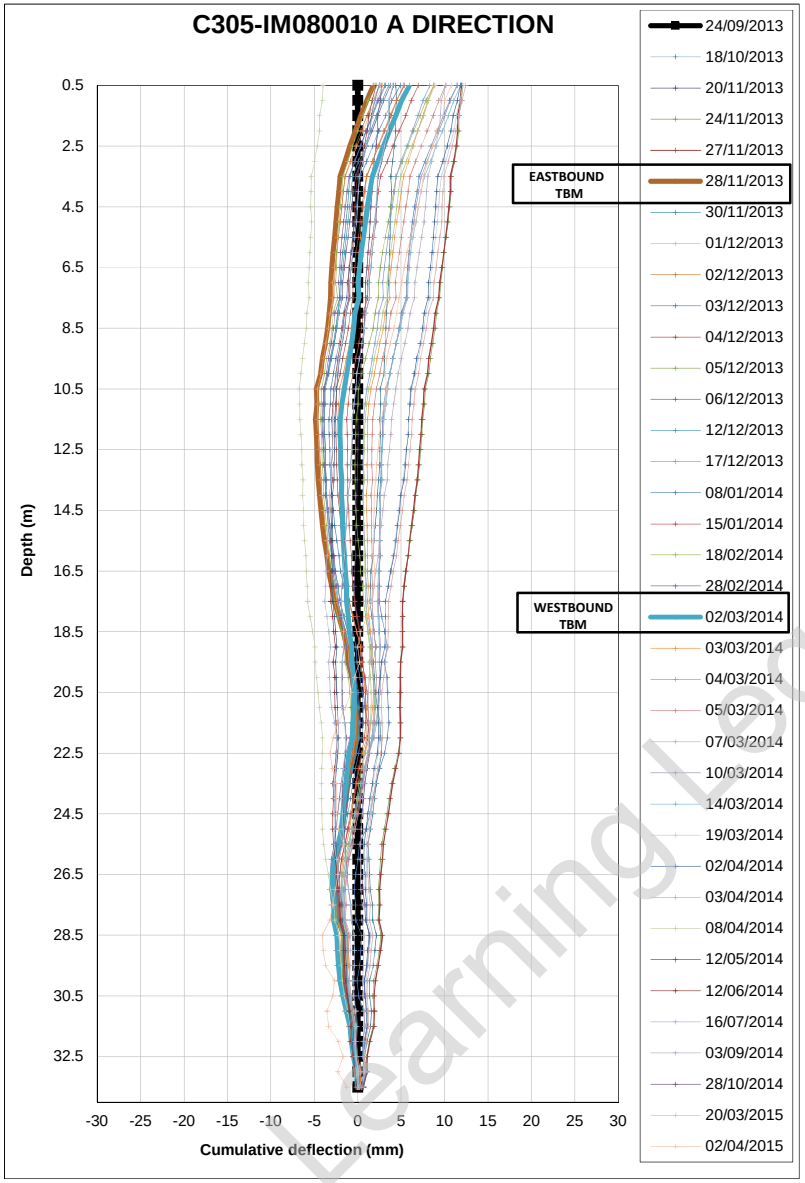
No correction has been applied to the axis probe readings for zero shift. It plays no part in the deflection or profile calculation and has no effect on the accuracy of the probe. No corrections have been applied for systematic errors.

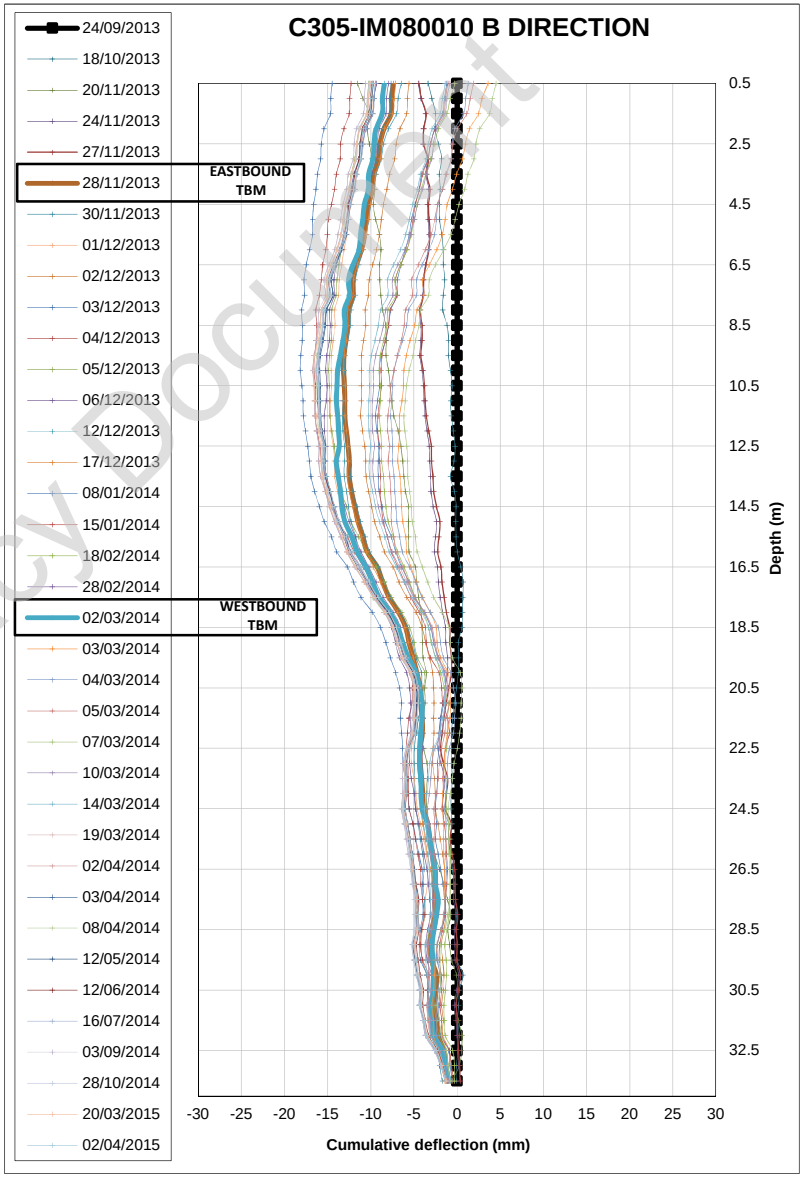
For the inclinometer C305-IM080010 different probes have been used. Related correction factors are presented in the table below:

CHANGE OF INCLINOMETERS AREA 8		
ID Sensor	C305-IM080010	
Serial number	DI1244/DI1217	DI1217/1144940
Date	28/11/2013	19/03/2014
A+	166	-176
A-	147	-160
B+	-146	151
B-	-106	147

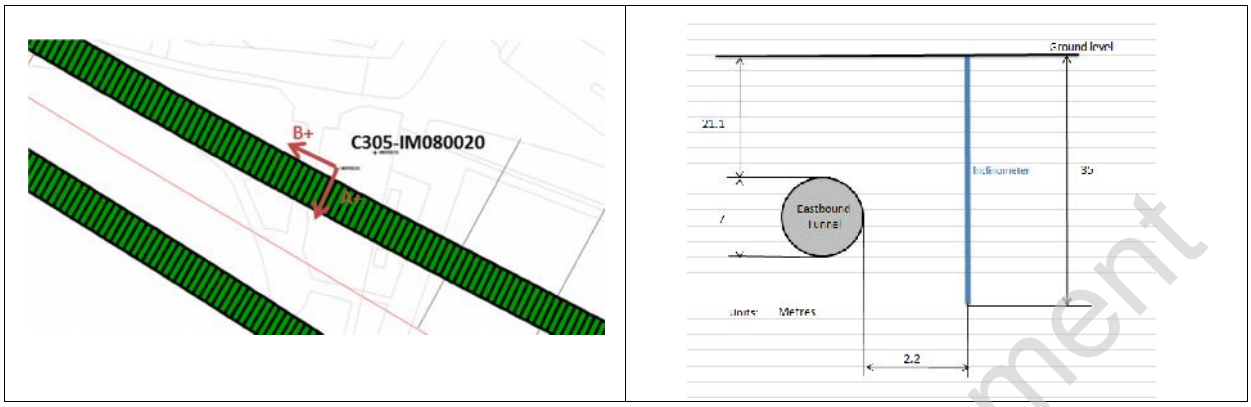
An evaluation of the data "checksum" has been carried out in order to find errors or erroneous readings. The two values obtained in diametrically opposite directions and at the same depth have been added and checked that these values vary by about +/- 20 digits around the average value. This interval can be larger for the axis B due to the required wheel tolerance in the track. That procedure have been carried out after the course of the survey.

Note: In a meeting between the PM, the Contractor & the Designer, dated 17 March 2016, it was agreed that DSJV will provide a report on inclinometers ("*INCLINOMETERS C-305 CHECKSUM AND TWISTING SPIRAL VERIFICATION: C305-DSJ-C2-RGN-CRG03-50373*"), which will include all raw data on excel sheet with dates of different probes used etc.





C305-IM080020



The dates when the TBMs were immediately adjacent to the inclinometer are as follows:

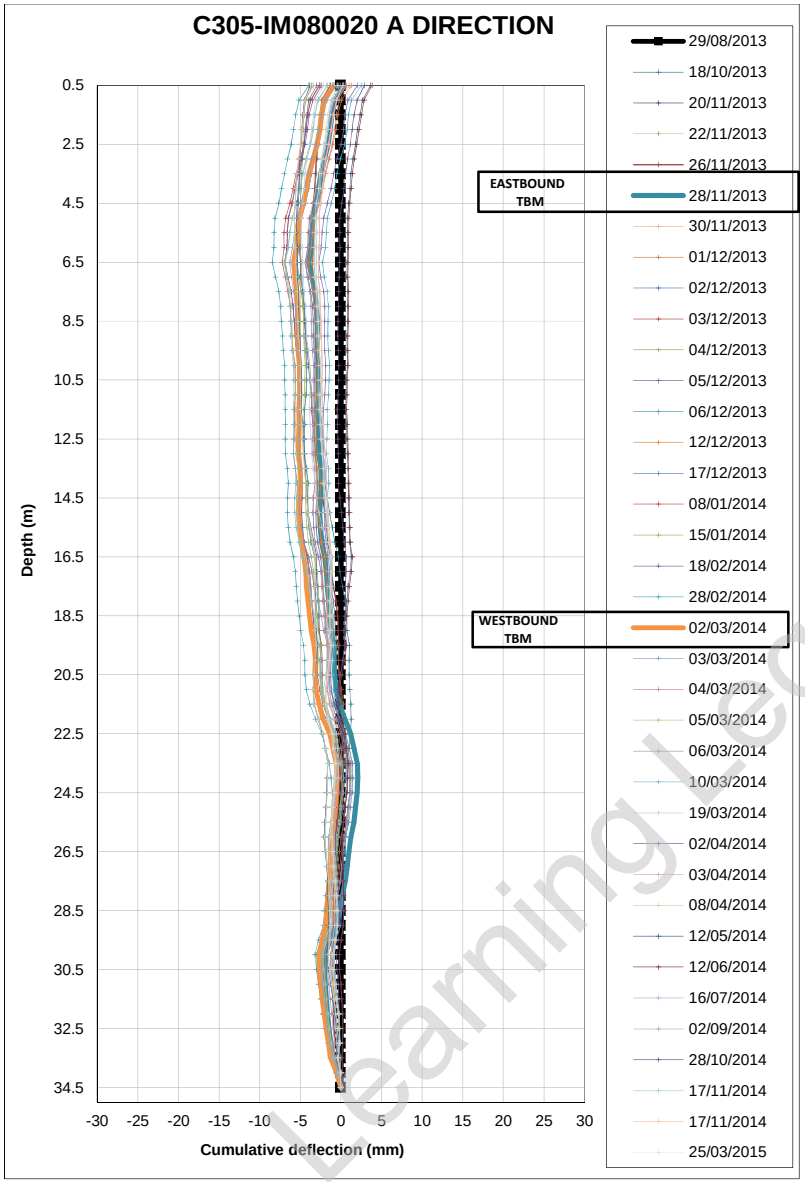
Eastbound Drive-Y	28/11/2013
Westbound Drive-Y	02/03/2014

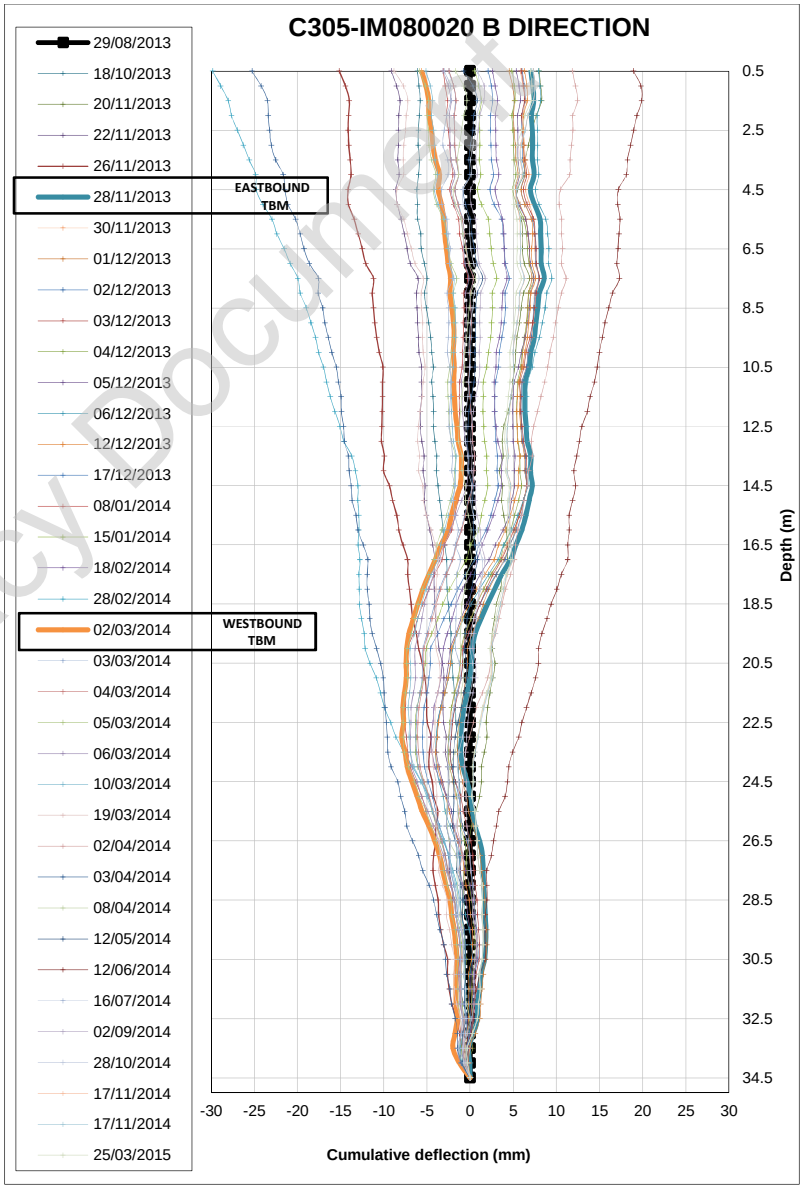
No correction has been applied to the axis probe readings for zero shift. It plays no part in the deflection or profile calculation and has no effect on the accuracy of the probe. No corrections have been applied for systematic errors.

For the inclinometer C305-IM080020 different probes have been used. Related correction factors are presented in the table below:

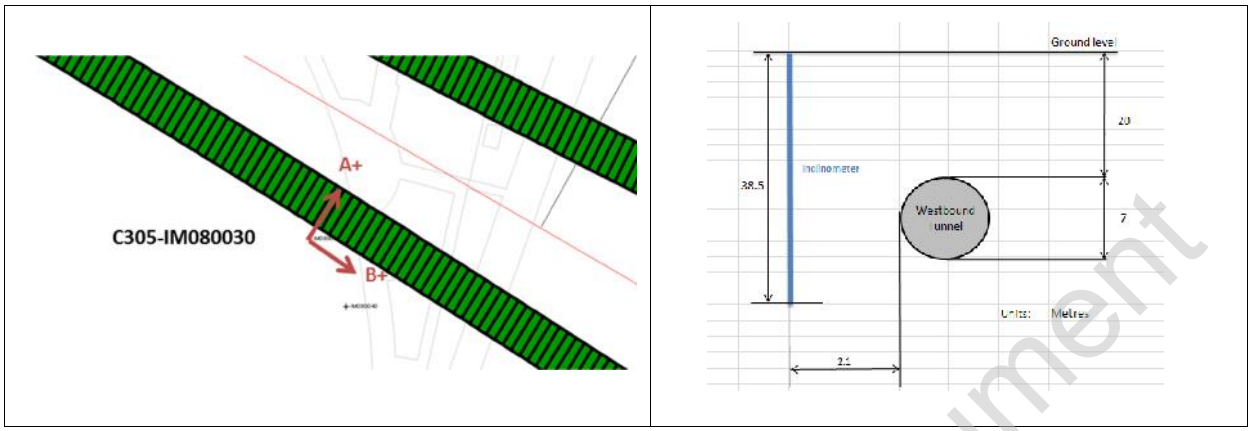
CHANGE OF INCLINOMETERS AREA 8		
ID Sensor	C305-IM080020	
Serial number	DI1244/DI1217	DI1217/1144940
Date	28/11/2013	19/03/2014
A+	148	-143
A-	177	-174
B+	-131	152
B-	-116	142

An evaluation of the data “checksum” has been carried out in order to find errors or erroneous readings. The two values obtained in diametrically opposite directions and at the same depth have been added and checked that these values vary by about +/- 20 digits around the average value. This interval can be larger for the axis B due to the required wheel tolerance in the track. That procedure have been carried out after the course of the survey.





C305-IM080030



The dates when the TBMs were immediately adjacent to the inclinometer are as follows:

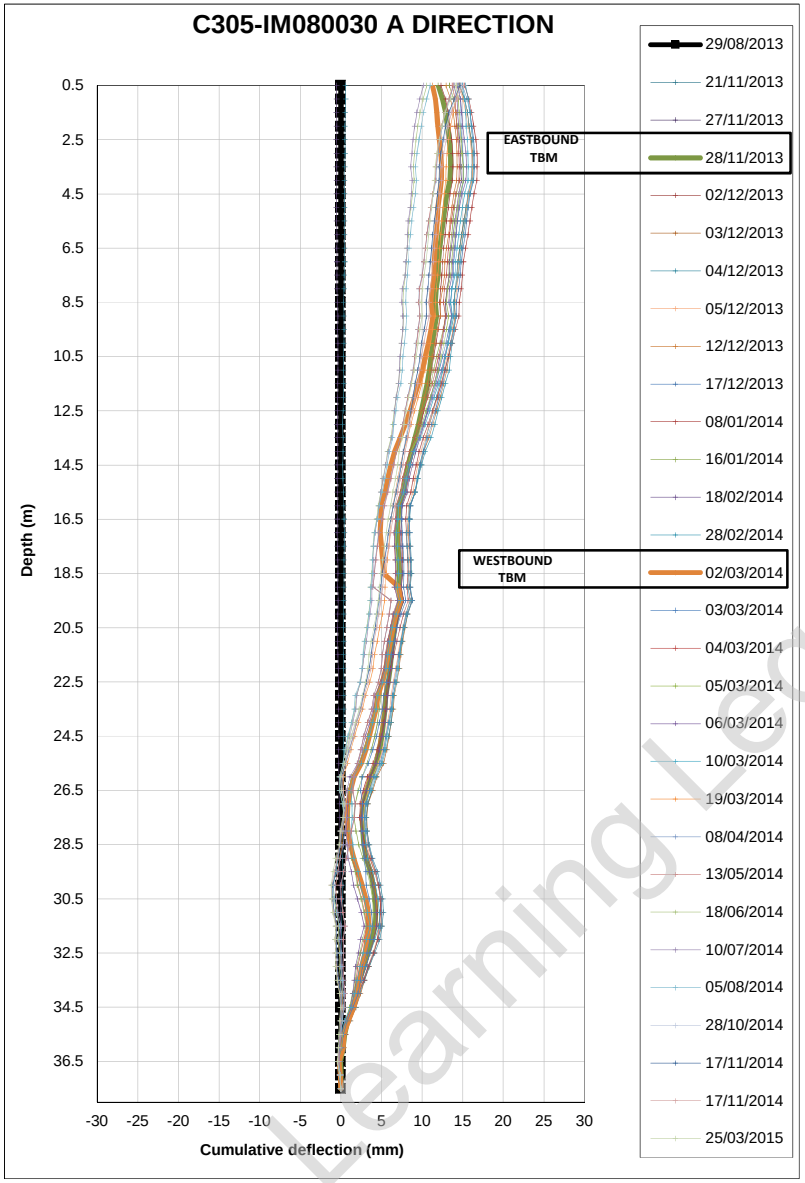
Eastbound Drive-Y	28/11/2013
Westbound Drive-Y	02/03/2014

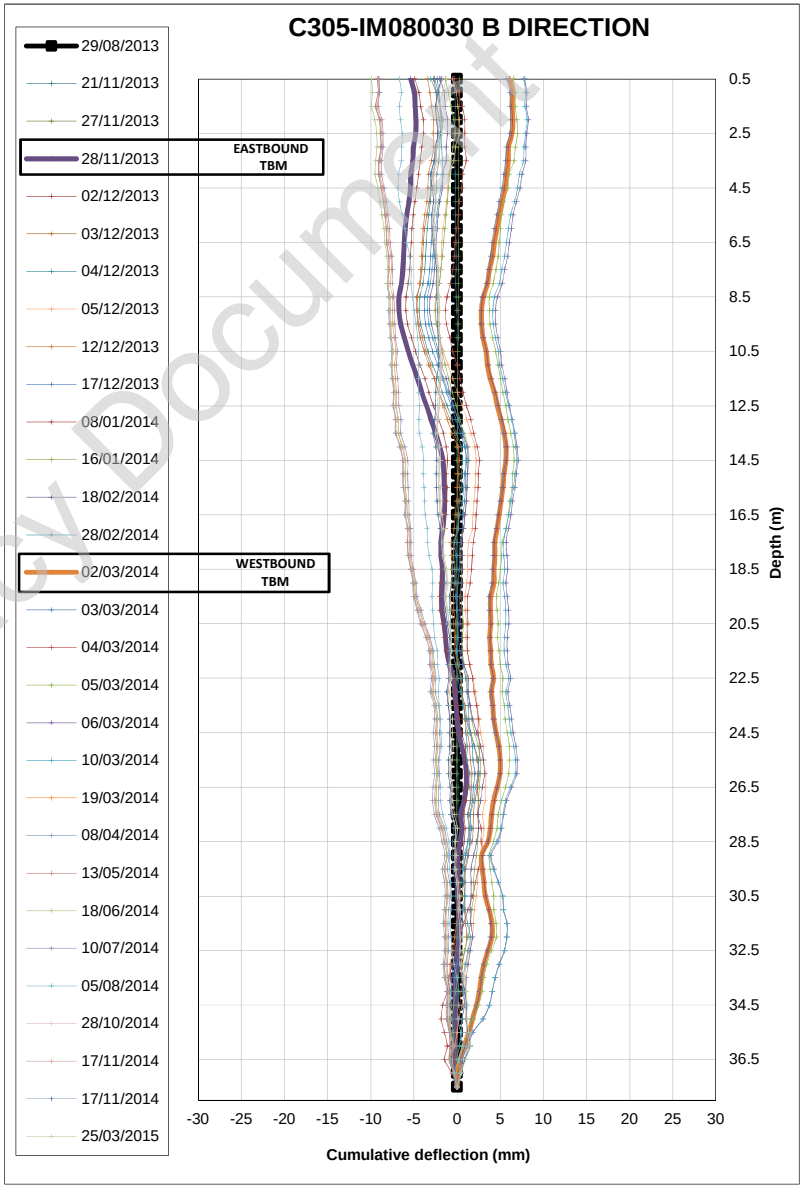
No correction has been applied to the axis probe readings for zero shift. It plays no part in the deflection or profile calculation and has no effect on the accuracy of the probe. No corrections have been applied for systematic errors.

For the inclinometer C305-IM080030 different probes have been used. Related correction factors are presented in the table below:

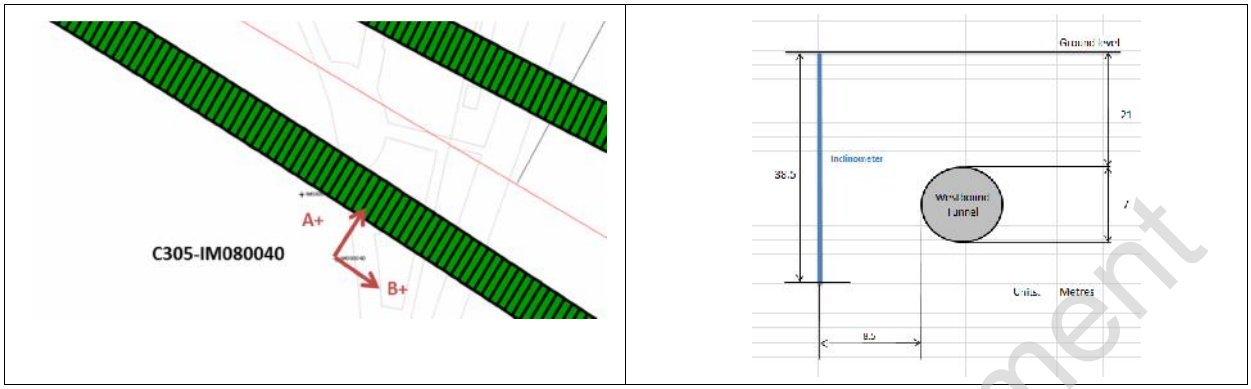
CHANGE OF INCLINOMETERS AREA 8		
ID Sensor	C305-IM080030	
Serial number	DI1244/DI1217	DI1217/1144940
Date	28/11/2013	19/03/2014
A+	166	-173
A-	145	-152
B+	-123	139
B-	-129	147

An evaluation of the data “checksum” has been carried out in order to find errors or erroneous readings. The two values obtained in diametrically opposite directions and at the same depth have been added and checked that these values vary by about +/- 20 digits around the average value. This interval can be larger for the axis B due to the required wheel tolerance in the track. That procedure have been carried out after the course of the survey.





C305-IM080040



The dates when the TBMs were immediately adjacent to the inclinometer are as follows:

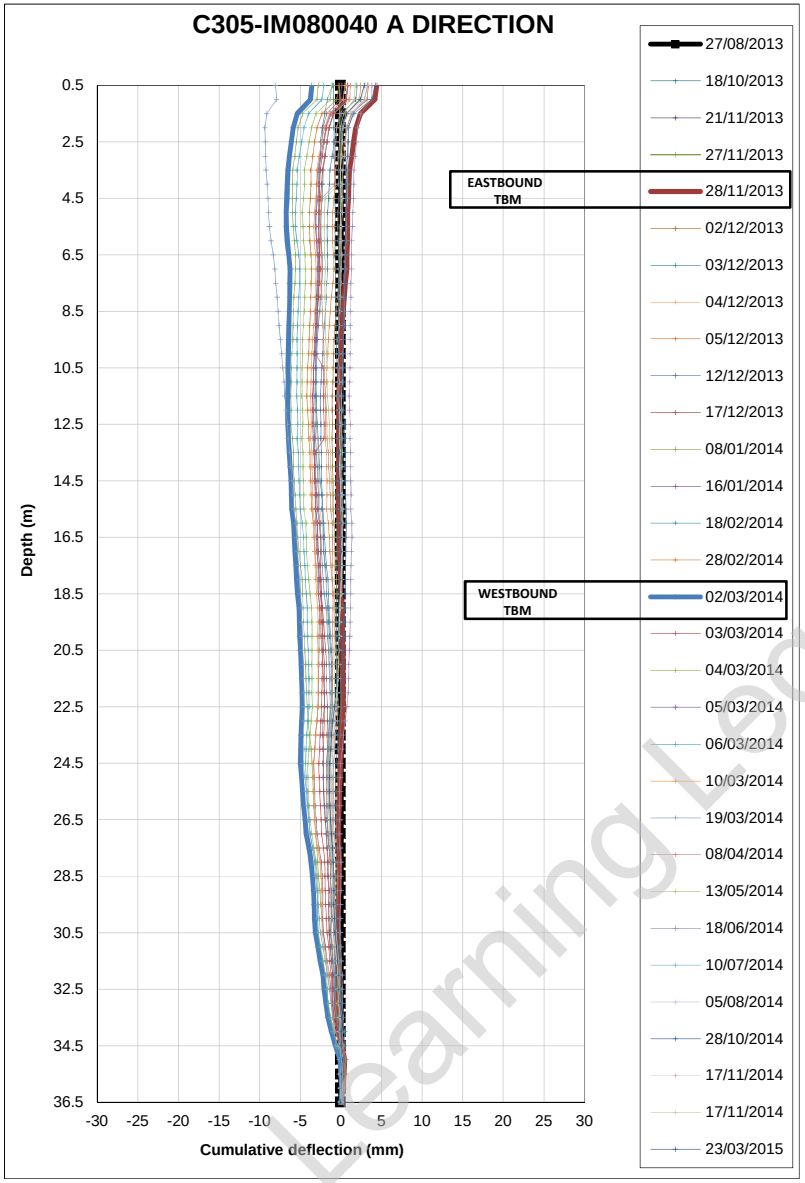
Eastbound Drive-Y	28/11/2013
Westbound Drive-Y	02/03/2014

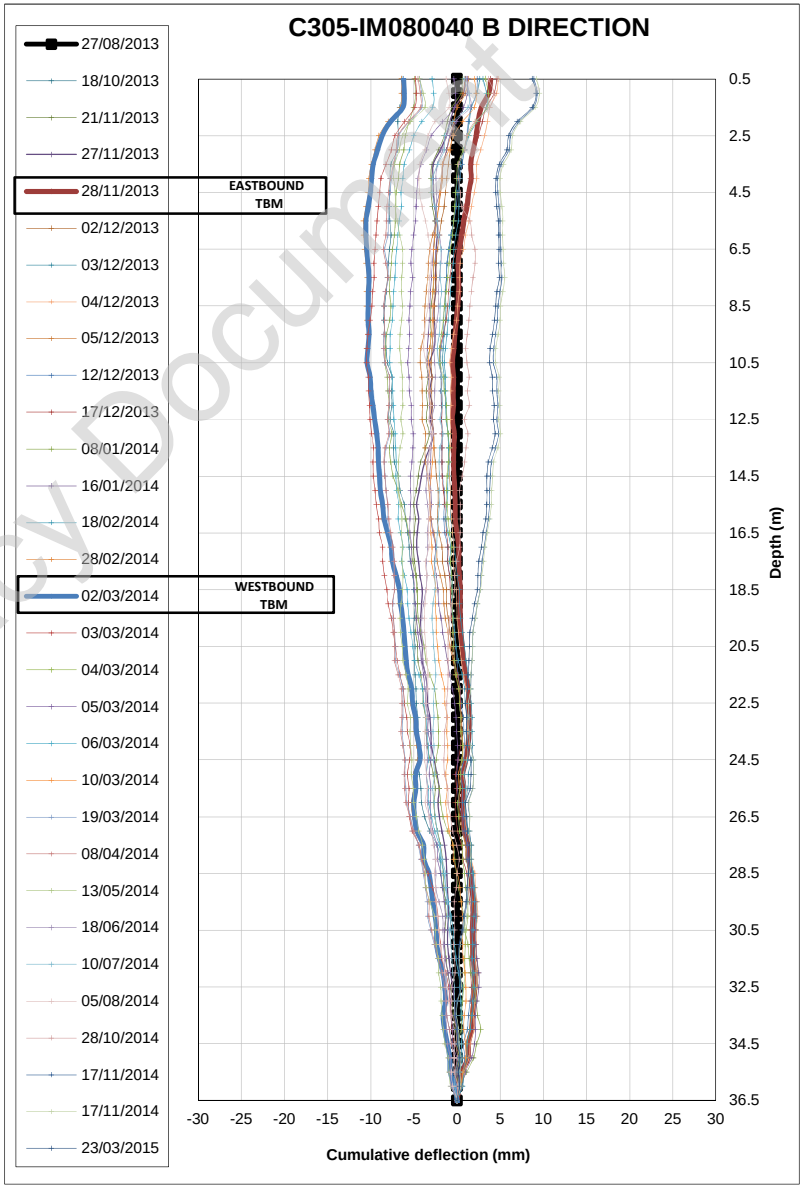
No correction has been applied to the axis probe readings for zero shift. It plays no part in the deflection or profile calculation and has no effect on the accuracy of the probe. No corrections have been applied for systematic errors.

For the inclinometer C305-IM080040 different probes have been used. Related correction factors are presented in the table below:

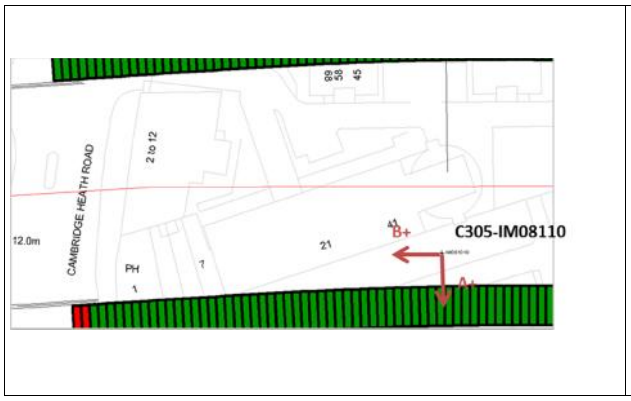
CHANGE OF INCLINOMETERS AREA 8		
ID Sensor	C305-IM080040	
Serial number	DI1244/DI1217	DI1244/1144940
Date	28/11/2013	19/03/2014
A+	145	-155
A-	168	-178
B+	-138	136
B-	-147	150

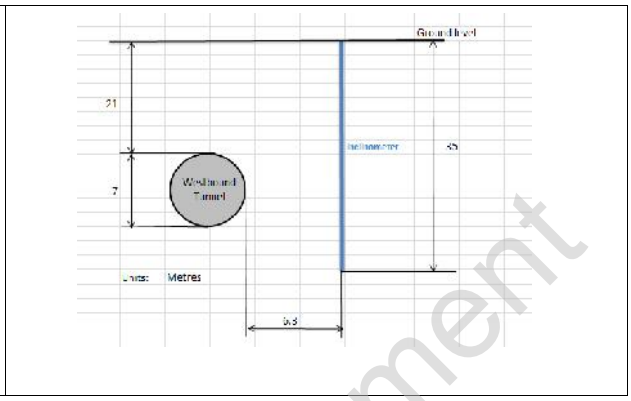
An evaluation of the data "checksum" has been carried out in order to find errors or erroneous readings. The two values obtained in diametrically opposite directions and at the same depth have been added and checked that these values vary by about +/- 20 digits around the average value. This interval can be larger for the axis B due to the required wheel tolerance in the track. That procedure have been carried out after the course of the survey.





C305-IM081010





The dates when the TBMs were immediately adjacent to the inclinometer are as follows:

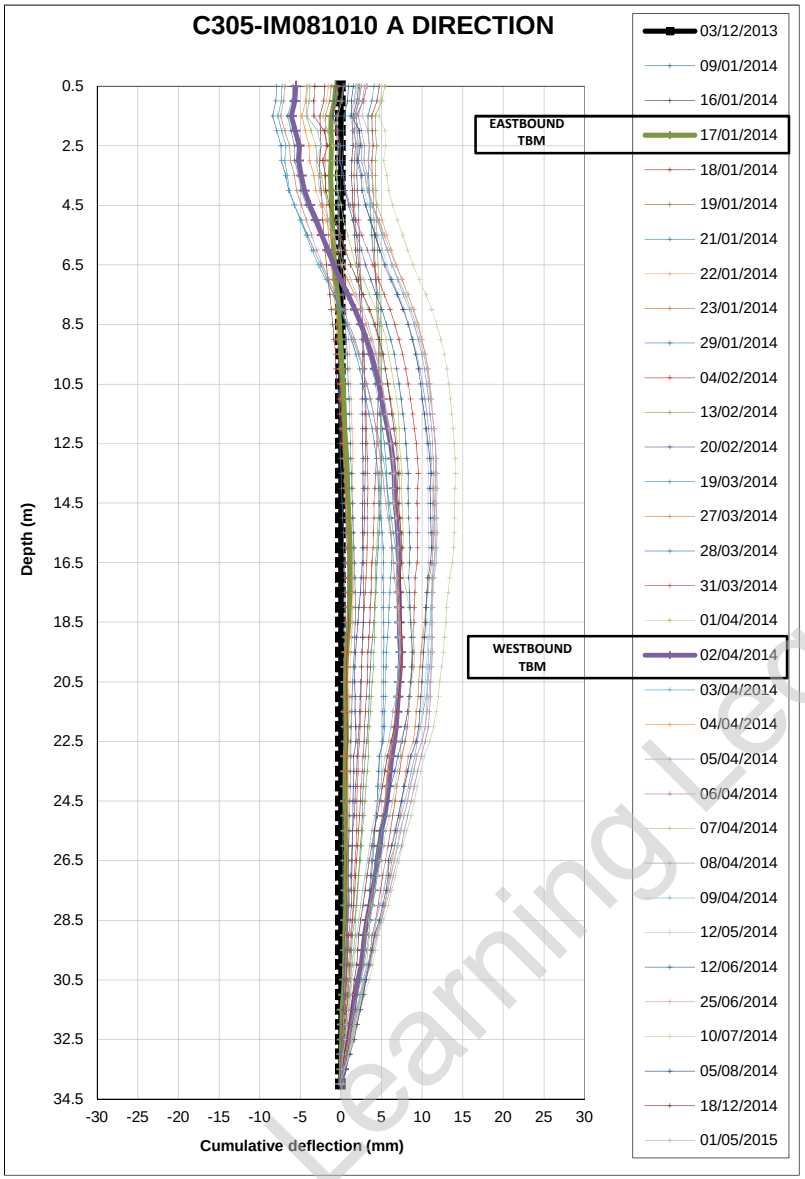
Eastbound Drive-Y	17/01/2014
Westbound Drive-Y	02/04/2014

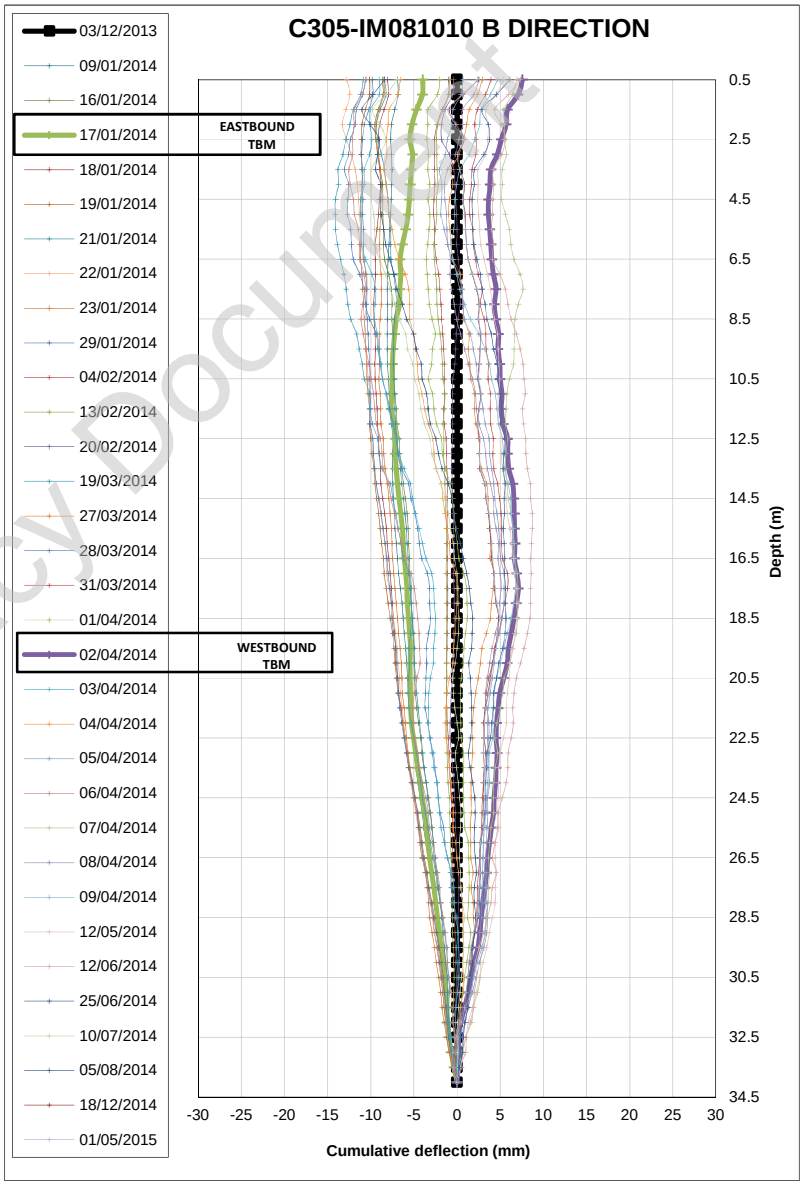
No correction has been applied to the axis probe readings for zero shift. It plays no part in the deflection or profile calculation and has no effect on the accuracy of the probe. No corrections have been applied for systematic errors.

For the inclinometer C305-IM081010 different probes have been used. Related correction factors are presented in the table below:

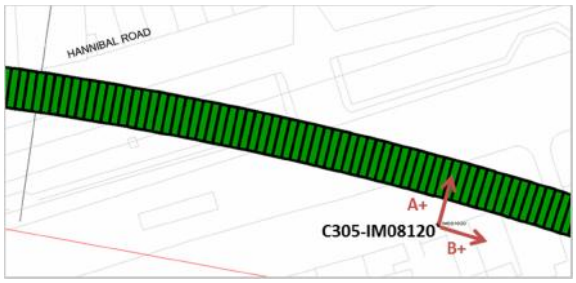
CHANGE OF INCLINOMETERS AREA 8	
ID Sensor	C305-IM081010
Serial number	DI1217/1144940
Date	19/03/2014
A+	-140
A-	-179
B+	133
B-	155

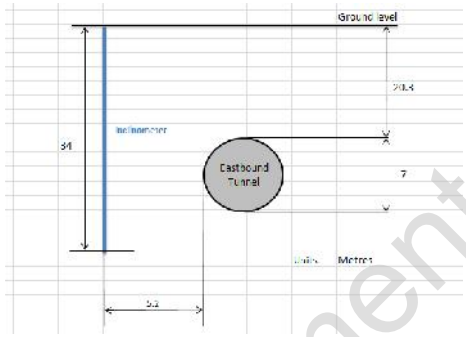
An evaluation of the data “checksum” has been carried out in order to find errors or erroneous readings. The two values obtained in diametrically opposite directions and at the same depth have been added and checked that these values vary by about +/- 20 digits around the average value. This interval can be larger for the axis B due to the required wheel tolerance in the track. That procedure have been carried out after the course of the survey.





C305-IM081020





The dates when the TBMs were immediately adjacent to the inclinometer are as follows:

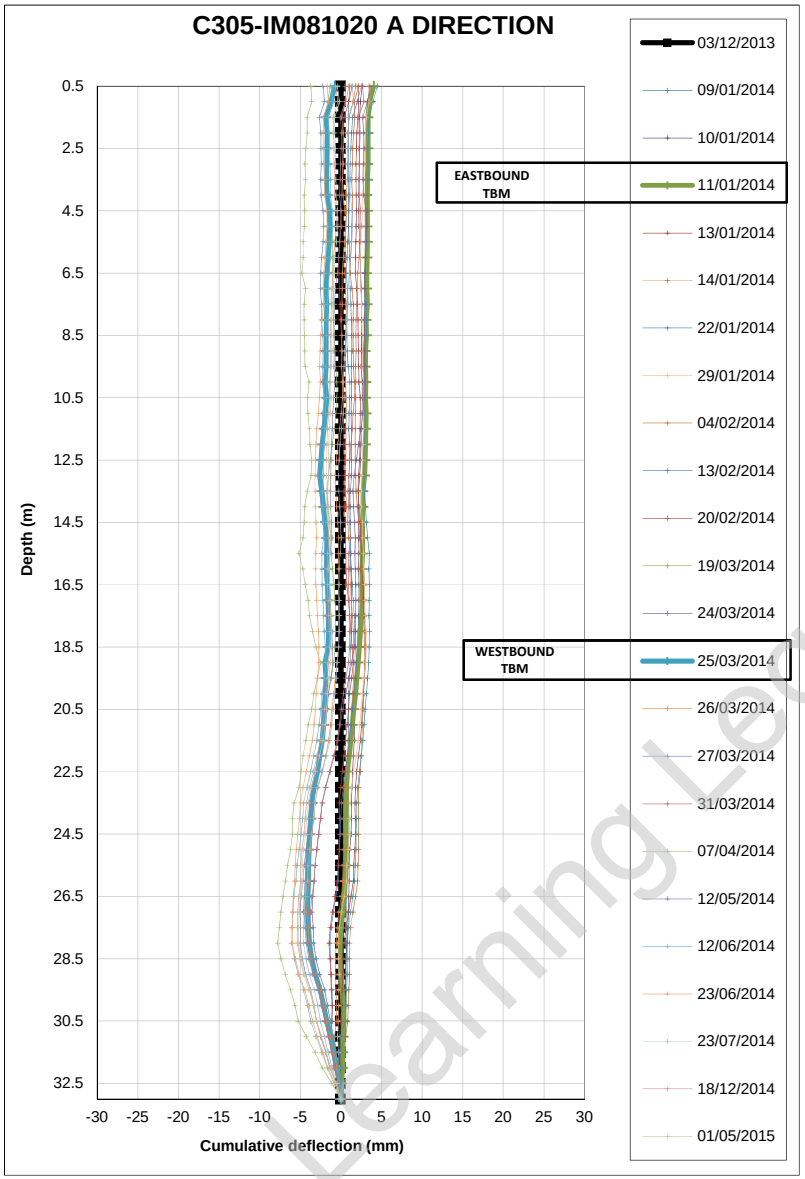
Eastbound Drive-Y	11/01/2014
Westbound Drive-Y	25/03/2014

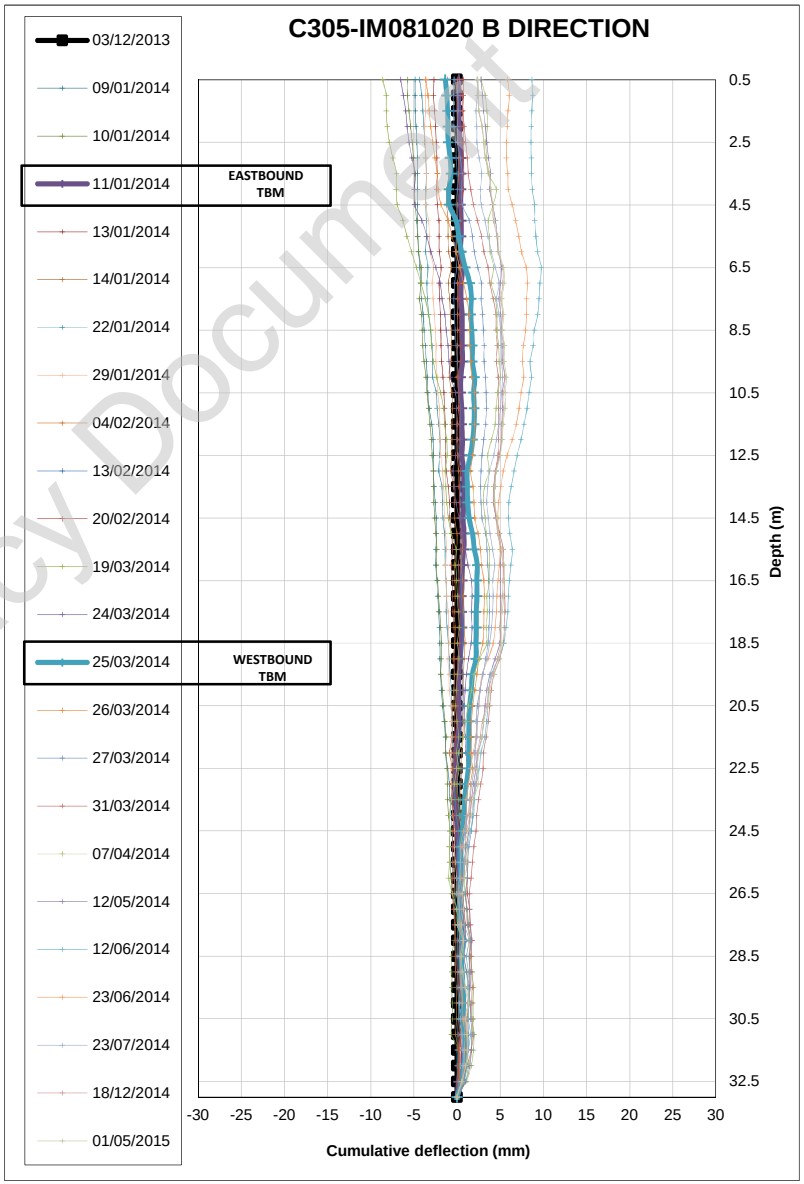
No correction has been applied to the axis probe readings for zero shift. It plays no part in the deflection or profile calculation and has no effect on the accuracy of the probe. No corrections have been applied for systematic errors.

For the inclinometer C305-IM081020 different probes have been used. Related correction factors are presented in the table below:

CHANGE OF INCLINOMETERS AREA 8	
ID Sensor	C305-IM081020
Serial number	DI1217/1144940
Date	19/03/2014
A+	-159
A-	-174
B+	145
B-	129

An evaluation of the data “checksum” has been carried out in order to find errors or erroneous readings. The two values obtained in diametrically opposite directions and at the same depth have been added and checked that these values vary by about +/- 20 digits around the average value. This interval can be larger for the axis B due to the required wheel tolerance in the track. That procedure have been carried out after the course of the survey.





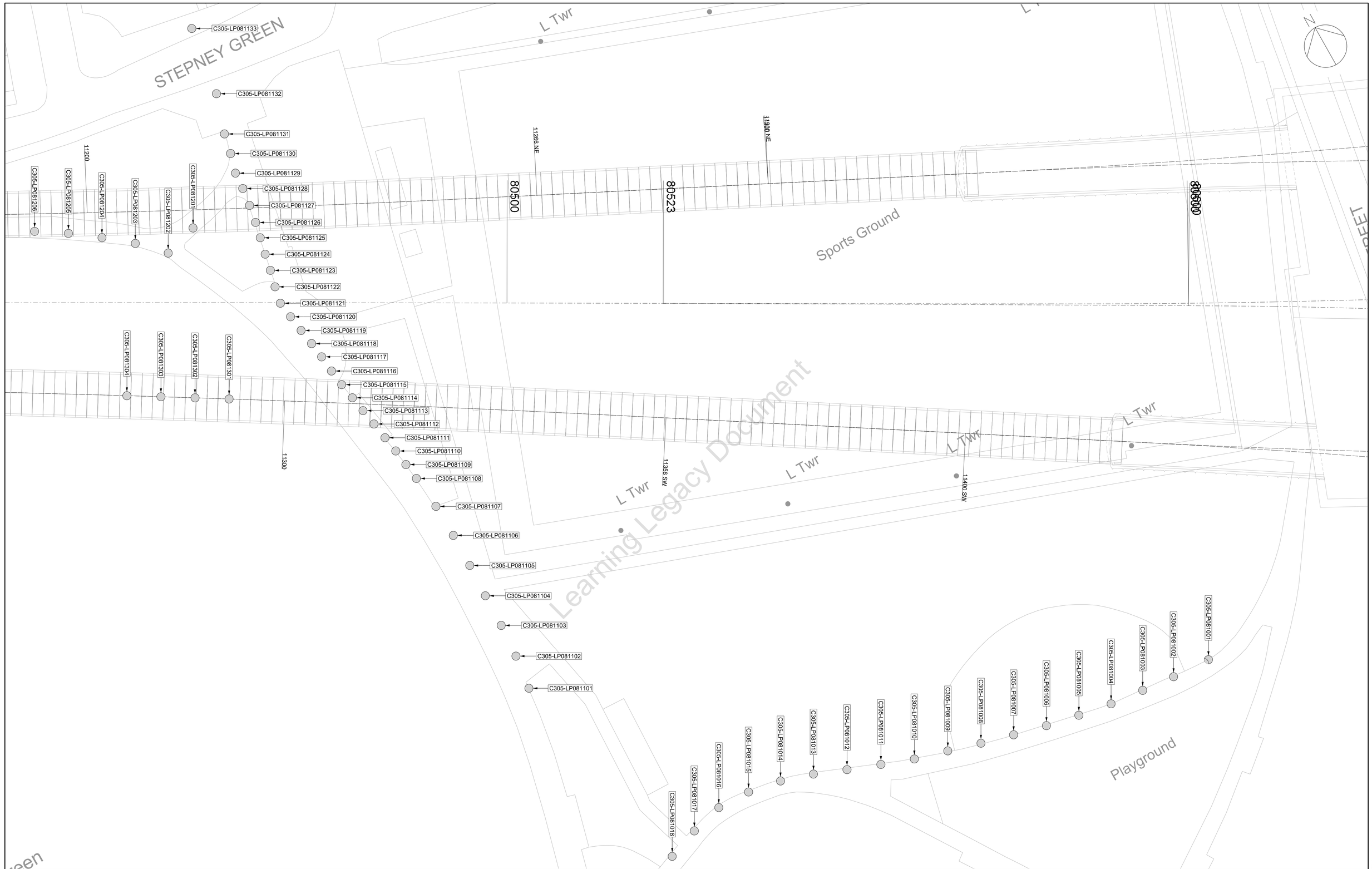
8. SUMMARY STATEMENT

It has been agreed between the Project Manager, the Designer, the Contractor and the Sub Contractor that the instrumentation covered herein, for monitoring ground movement effects of Crossrail works, including long term effects, can be closed out for decommissioning as the trend of the monitoring points was approaching or had achieved the specified 2mm/yr settlement rate.

Minutes of the Close Out meeting are attached as appendix C.

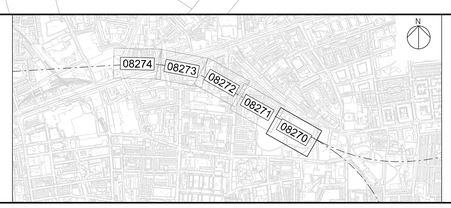
APPENDIX A:

INSTRUMENT LOCATION



Rev.	Date	Description	By	Chkd	App	Auth
P01	16/11/2015	First Issue	MD	SD	SD	-

Notes
- Levelling Points
- Sockets
- 3D Prisms
- Retro Targets



1:250 @ A1

Crossrail Limited
25 Canada Square
Canary Wharf
London
E14 5LQ

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www.crossrail.co.uk

Contract : Tunnels East - Drive Y LIM to FAR & Drive Z SGJ to PML & Drive G

Originator : Dragados Sisk Joint Venture

Location : Crossrail Tunnels - Drive Y (Limmo Peninsula to Farringdon Stn)

Title : Instrumentation & Monitoring
Installation Report for Monitoring Equipment
Stepney Green to Whitechapel (Drive Y)
C305-DSJ-C2-RGN-CRG03-50165

By : M.DAVIS
Chk : S.DIRIKWE
App : S.DIRIKWE
Auth : ---

Scale : 1:250@ A1

Drawing and CAD file No : C305-DSJ-C2-DDA-CRT00_ST006_1-08270

Rev : P01

Suitability : S4

Fit for authorisation

RESTRICTED

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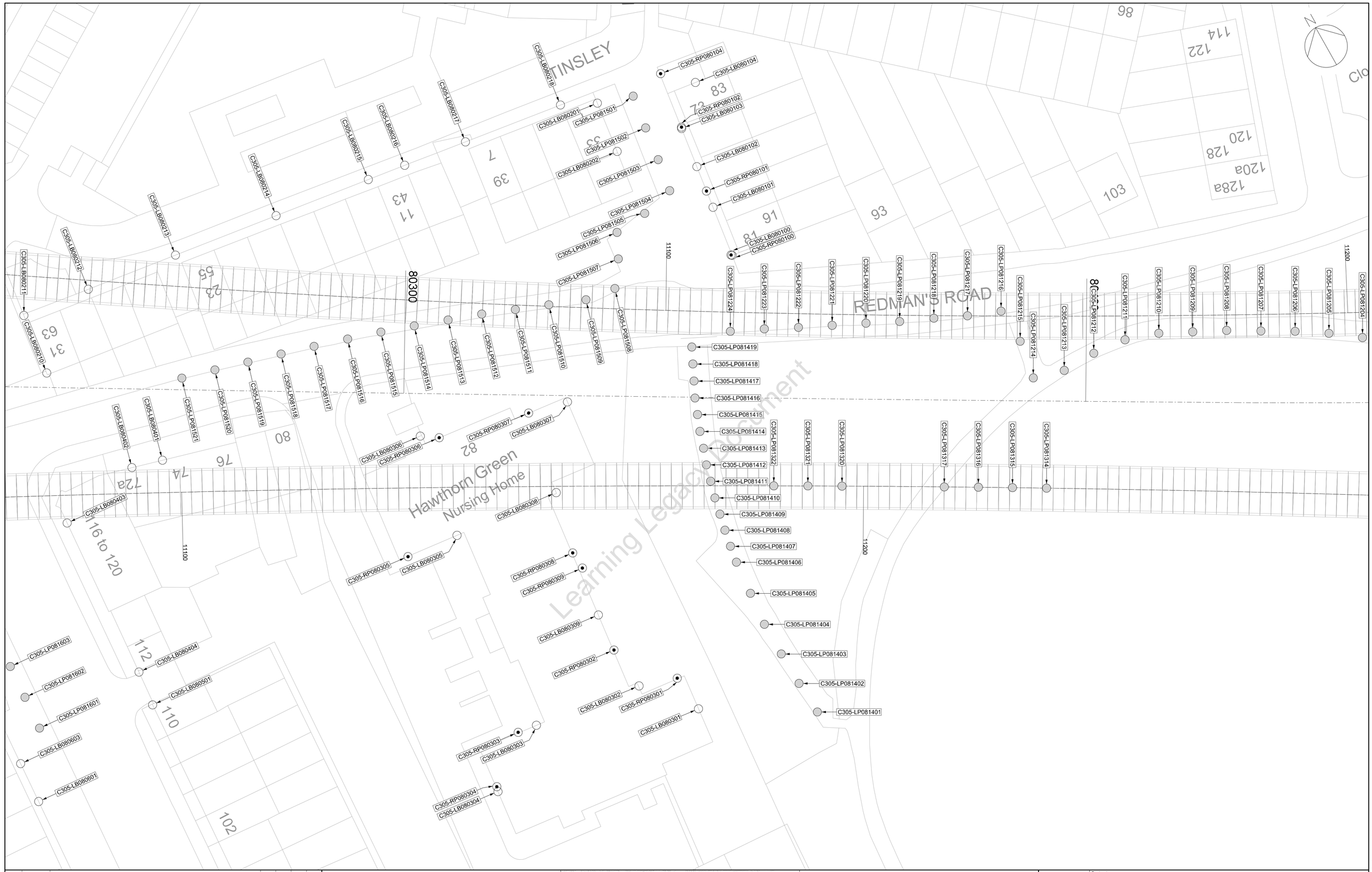
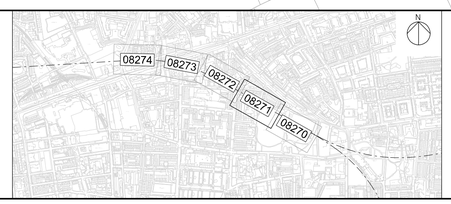


Rev.	Date	Description	By	Chkd	App	Auth
						-
P01	16/11/2015	First Issue	MD	SD	SD	-

Notes

- Levelling Points
- Sockets
- 3D Prisms
- Retro Targets



5m 0 5m 10m 15m 20m 25m

1:250 @ A1

Crossrail Limited
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By : M.DAVIS
Chk : S.DIRIKWE
App : S.DIRIKWE
Auth : __

Scale : 1:250@ A1

Drawing and CAD file No : C305-DSJ-C2-DDA-CRT00_ST006_1-08271

Rev : P01

Suitability : S4

Fit for authorisation

RESTRICTED

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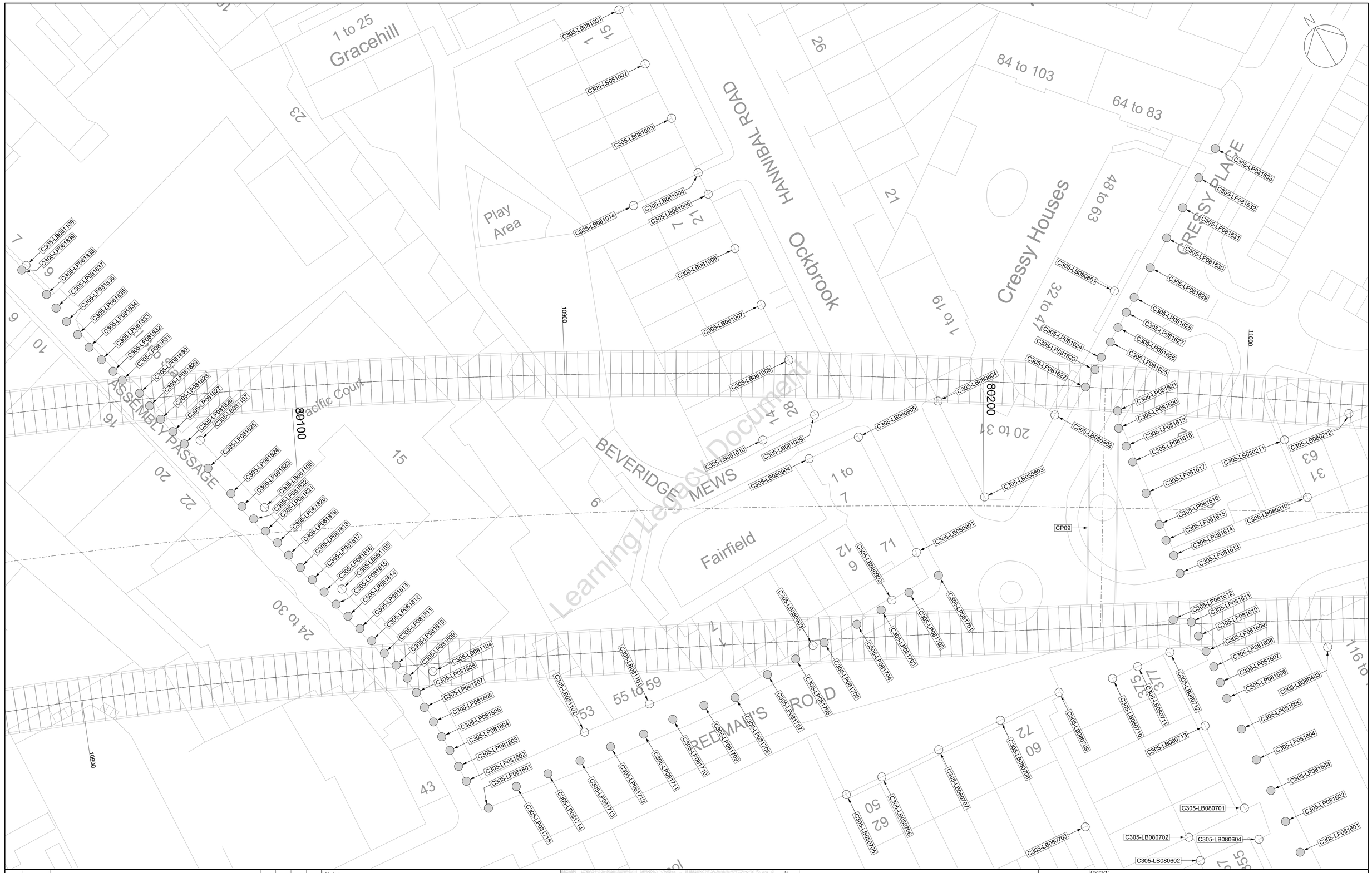

Notes

- Levelling Points
- Sockets
- 3D Prisms
- Retro Targets

Rev.	Date	Description	By	Chkd	App	Auth
P01	16/11/2015	First Issue	MD	SD	SD	-

5m 0 5m 10m 15m 20m 25m
1:250 @ A1

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London
E14 5LQ

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Contract : Tunnels East - Drive Y LIM to FAR & Drive Z SGJ to PML & Drive G

Originator : Dragados Sisk Joint Venture

Location : Crossrail Tunnels - Drive Y (Limmo Peninsula to Farringdon Stn)

Title : Instrumentation & Monitoring
Installation Report for Monitoring Equipment
Stepney Green to Whitechapel (Drive Y)
C305-DSJ-C2-RGN-CRG03-50165

By : M.DAVIS
Chk : S.DIRIKWE
App : S.DIRIKWE
Auth : __

Scale :	Drawing and CAD file No :	Rev :	Suitability :
1:250@ A1	C305-DSJ-C2-DDA-CRT00_ST006_1-08272	P01	S4

Fit for authorisation

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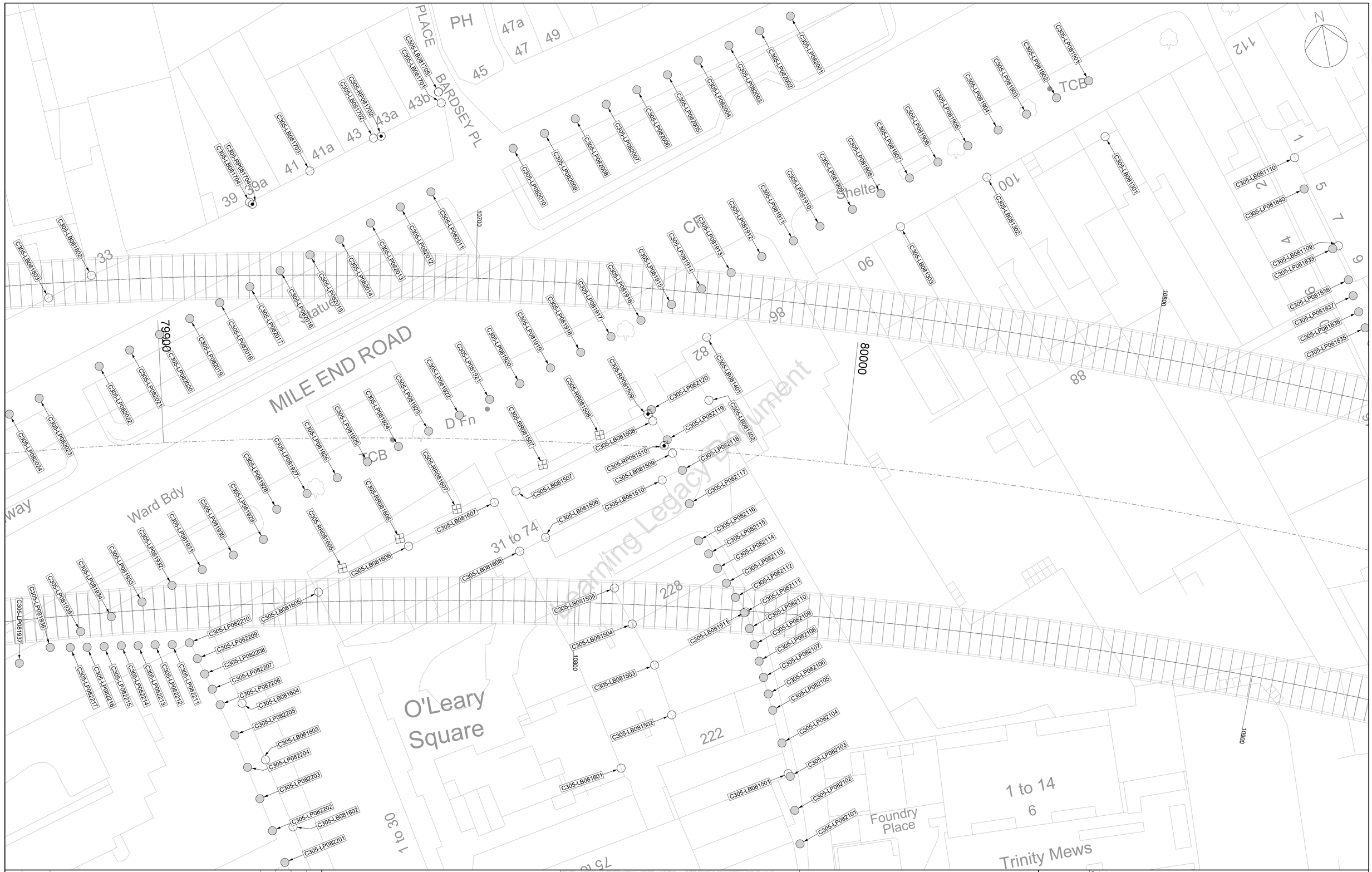
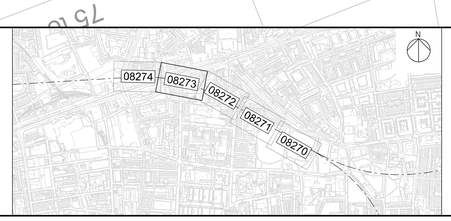


Rev.	Date	Description	By	Chkd	App	Auth
						-
P01	26/11/2015	First Issue	MD	SD	SD	-

Notes

- Levelling Points
- Sockets
- 3D Prisms
- Retro Targets



1:250 @ A1

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Contract : Tunnels East - Drive Y LIM to FAR & Drive Z SGJ to PML & Drive G

Originator : Dragados Sisk Joint Venture

Location : Crossrail Tunnels - Drive Y (Limmo Peninsula to Farringdon Stn)

Title : Instrumentation & Monitoring
Installation Report for Monitoring Equipment
Stepney Green to Whitechapel (Drive Y)
C305-DSJ-C2-RGN-CRG03-50165

By : M.DAVIS
Chk : S.DIRIKWE
App : S.DIRIKWE
Auth : ---

Scale : 1:250@ A1

Drawing and CAD file No : C305-DSJ-C2-DDA-CRT00_ST006_1-08273

Rev : P01

Suitability : S4

Fit for authorisation

RESTRICTED

C305-DSJ-C2-DDA-CRT00_ST006_1-08273.dgn 27/11/2015 11:04:19

Rev.	Date	Description	By	Chkd	App	Auth
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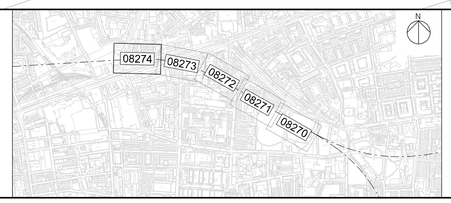
P01	26/11/2015	First Issue	MD	SD	SD	-

Notes
- Levelling Points
- Sockets
- 3D Prisms
- Retro Targets



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1:250 @ A1

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Contract : Tunnels East - Drive Y LIM to FAR & Drive Z SGJ to PML & Drive G

Originator : Dragados Sisk Joint Venture

Location : Crossrail Tunnels - Drive Y (Limmo Peninsula to Farringdon Stn)

Title : Instrumentation & Monitoring
Installation Report for Monitoring Equipment
Stepney Green to Whitechapel (Drive Y)
C305-DSJ-C2-RGN-CRG03-50165

By : M.DAVIS
Chk : S.DIRIKWE
App : S.DIRIKWE
Auth : ---

Scale :	Drawing and CAD file No :	Rev :	Suitability :
1:250@ A1	C305-DSJ-C2-DDA-CRT00_ST006_1-08274	P01	S4

Fit for authorisation

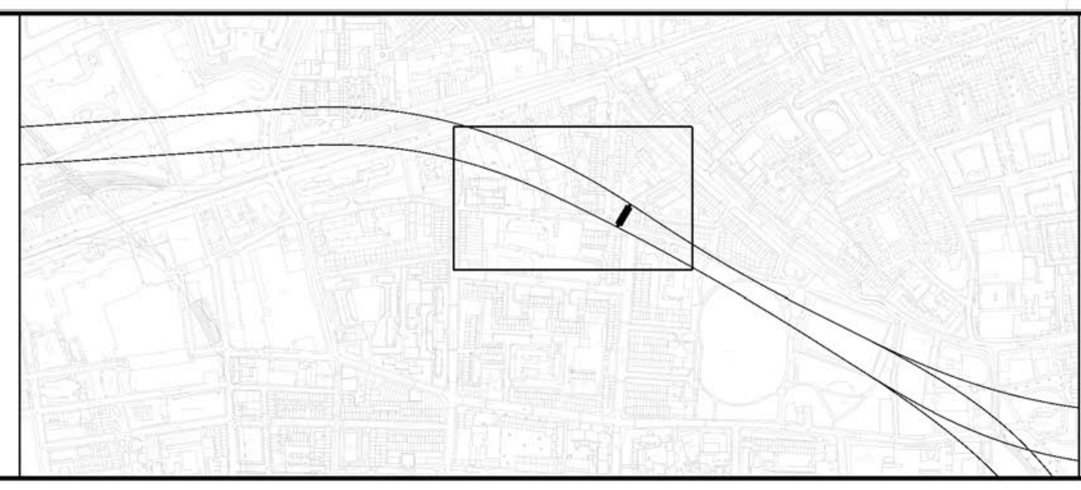
RESTRICTED

C305-DSJ-C2-DDA-CRT00_ST006_1-08274.dgn 27/11/2015 11:06:06

Rev.	Date	Description	By	Chkd	App	Auth
P01	21/03/2014	First Issue	AH	AH	RC	-
P02	30/11/2015	---	MD	SD	SD	-

Notes

▲ Shallow Datum



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1:400 @ A1

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Contract : Tunnels East - Drive Y LIM to FAR & Drive Z SGJ to PML & Drive G

Originator : Dragados Sisk Joint Venture

Location : Crossrail Tunnels - Drive Y (Limmo Peninsula to Farringdon Stn)

Title : Instrumentation & Monitoring
I&M Installation Report for Radcliff
Sewer Boreholes (Drive Y)

By : M.DAVIS
Chk : S.DIRIKWE
App : S.DIRIKWE
Auth : ---

Scale : Various@ A1
Drawing and CAD file No : C305-DSJ-C2-DDA-CRT00_ST006_Z-08087
Rev : P02
Suitability : S4

Fit for authorisation

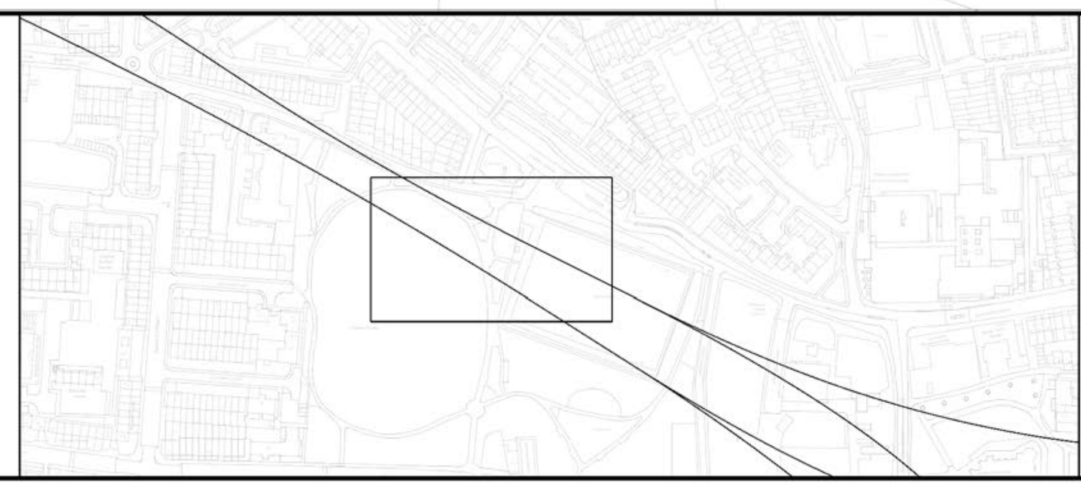
RESTRICTED

C305-DSJ-C2-DDA-CRT00_ST006_Z-08087.dgn 30/11/2015 16:58:48

Rev.	Date	Description	By	Chkd	App	Auth
P01	25/03/2014	First Issue	AH	AH	RC	-
P02	09/12/2015	---	MD	MD	MD	-

Notes

- Inclinometer
- Rod Extensometer
- Vibrating Wire Piezometer



4m 0 4m 8m 12m 16m 20m

1:200 @ A1

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Contract : Tunnels East - Drive Y LIM to FAR & Drive Z SGJ to PML & Drive G

Originator : Dragados Sisk Joint Venture

Location : Crossrail Tunnels - Drive Y (Limmo Peninsula to Farringdon Stn)

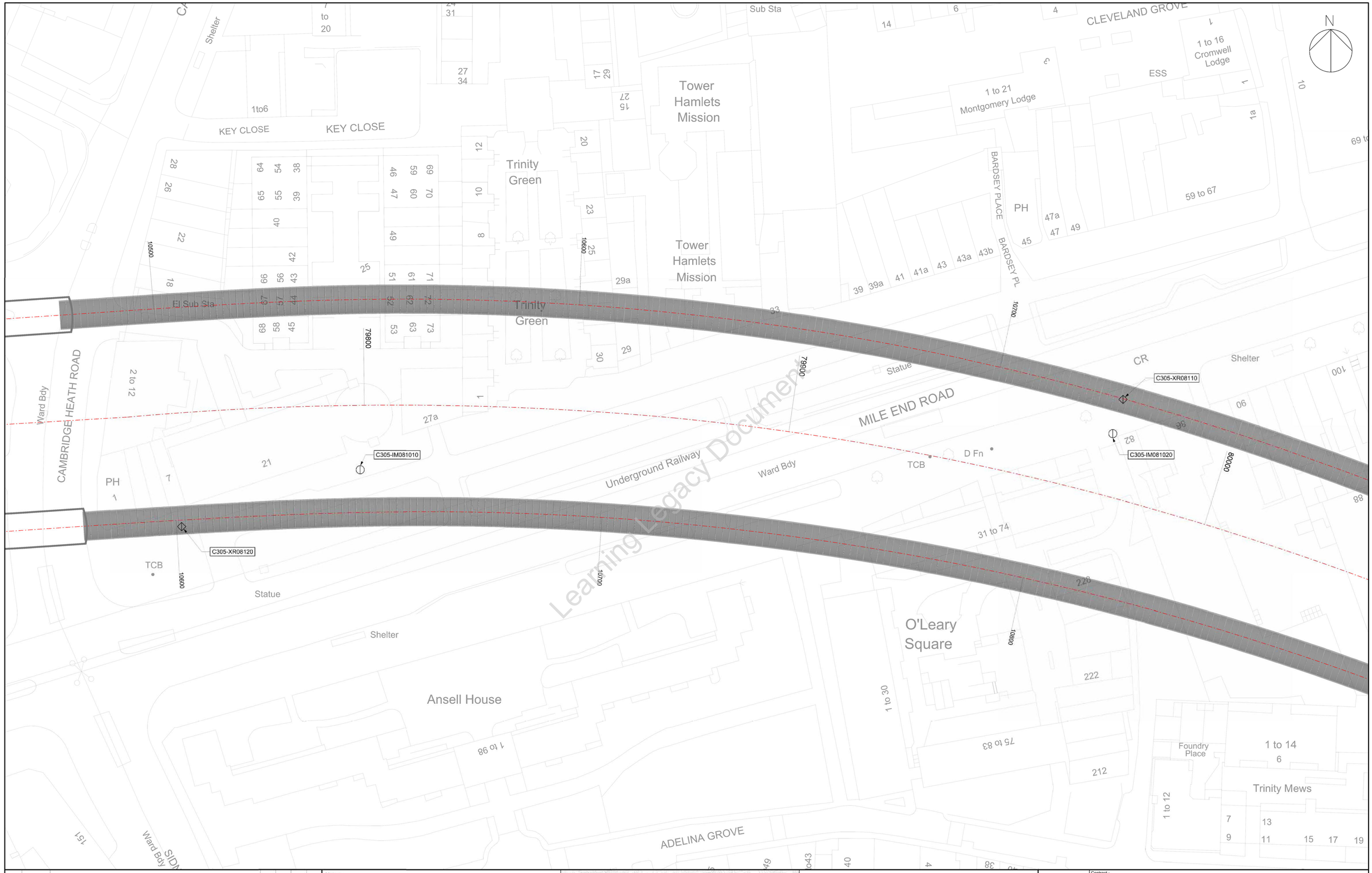
Title : Instrumentation & Monitoring
I&M Installation Report for
Section B Stepney Green Park Boreholes (Drive Y)

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

Scale : 1:200@ A1 | Drawing and CAD file No : C305-DSJ-C2-DDA-CRT00_ST006_Z-08089 | Rev : P02 | Suitability : S4

Fit for authorisation

RESTRICTED



Rev.	Date	Description	By	Chkd	App	Auth
P01	25/03/2014	First Issue	AH	AH	RC	-
P02	27/11/2015	---	MD	SD	SD	-

Notes

Inclinometer

Rod Extensometer

8m 0 8m 16m 24m 32m 40m

1:400 @ A1

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Contract : Tunnels East - Drive Y LIM to FAR & Drive Z SGJ to PML & Drive G

Originator : Dragados Sisk Joint Venture

Location : Crossrail Tunnels - Drive Y (Limmo Peninsula to Farringdon Stn)

Title : Instrumentation & Monitoring
I&M Installation Report for Boreholes
Sections Q&Q&R Mile End Road

By : M.DAVIS

Chk : S.DIRIKWE

App : S.DIRIKWE

Auth : ---

Scale : Various@ A1

Drawing and CAD file No : C305-DSJ-C2-DDA-CRT00_ST006_Z-08088

Rev : P02

Suitability : S4

Fit for authorisation

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APPENDIX B:

SUMMARY OF INSTRUMENTATION INSTALLED ON SITE

IRS Installation Record Sheets - 3D Prism									
Sensor Type	Sensor ID	Date Installation	Status	Sensor Location - GPS Reading			Commisioning Readings (m)		
				Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	Eastings X (m)	Northings Y (m)	Elevation Z (mATD)
							27-11-13		
3D Prism	C305-RP080100	19-11-13	Installed	85888.350	36424.384	115.352	85888.350	36424.384	115.352
							85888.350	36424.384	115.352
							85888.350	36424.385	115.352
							85888.350	36424.385	115.352
3D Prism	C305-RP080101	19-11-13	Installed	85889.826	36434.322	115.194	85889.826	36434.322	115.194
							85889.826	36434.322	115.195
							85889.827	36434.322	115.194
							85889.827	36434.322	115.194
3D Prism	C305-RP080102	19-11-13	Installed	85891.246	36444.281	115.216	85891.246	36444.281	115.216
							85891.246	36444.281	115.215
							85891.246	36444.280	115.216
							85891.246	36444.281	115.216
3D Prism	C305-RP080104	19-11-13	Installed	85892.436	36452.619	115.201	85892.436	36452.619	115.201
							85892.437	36452.618	115.202
							85892.436	36452.619	115.201
							85892.436	36452.619	115.201
							03-12-13		
3D Prism	C305-RP080301	29-11-13	Installed	85850.964	36374.229	113.741	85850.964	36374.229	113.741
							85850.964	36374.229	113.742
							85850.964	36374.229	113.741
							85850.963	36374.229	113.741
3D Prism	C305-RP080302	29-11-13	Installed	85844.912	36382.388	113.728	85844.912	36382.388	113.728
							85844.912	36382.389	113.728
							85844.912	36382.388	113.727
							85844.912	36382.388	113.728
3D Prism	C305-RP080303	29-11-13	Installed	85826.749	36378.788	114.193	85826.749	36378.788	114.193
							85826.749	36378.787	114.193
							85826.748	36378.788	114.193
							85826.749	36378.788	114.193
3D Prism	C305-RP080304	29-11-13	Installed	85820.104	36373.386	116.994	85820.104	36373.386	116.994
							85820.104	36373.386	116.994
							85820.104	36373.387	116.994
							85820.104	36373.386	116.994
3D Prism	C305-RP080305	29-11-13	Installed	85825.349	36409.172	114.023	85825.349	36409.172	114.023
							85825.349	36409.172	114.022
							85825.350	36409.173	114.023
							85825.349	36409.172	114.023

IRS Installation Record Sheets - 3D Prism									
Sensor Type	Sensor ID	Date Installation	Status	Sensor Location - GPS Reading			Commisioning Readings (m)		
				Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	Eastings X (m)	Northings Y (m)	Elevation Z (mATD)
3D Prism	C305-RP080306	29-11-13	Installed	85837.916	36422.107	114.175	85837.916	36422.107	114.175
							85837.916	36422.108	114.176
							85837.915	36422.107	114.175
							85837.916	36422.107	114.175
3D Prism	C305-RP080307	29-11-13	Installed	85851.108	36418.803	114.109	85851.108	36418.803	114.109
							85851.109	36418.803	114.109
							85851.108	36418.803	114.110
							85851.108	36418.803	114.109
3D Prism	C305-RP080308	29-11-13	Installed	85846.652	36397.764	114.351	85846.652	36397.764	114.351
							85846.652	36397.764	114.351
							85846.653	36397.763	114.351
							85846.652	36397.764	114.351
3D Prism	C305-RP080309	29-11-13	Installed	85846.802	36395.135	119.634	85846.802	36395.135	119.634
							85846.801	36395.136	119.635
							85846.802	36395.135	119.634
							85846.802	36395.136	119.633
								02-12-13	
3D Prism	C305-RP081509	02-12-13	Installed	85541.457	36575.486	114.148	85541.457	36575.486	114.148
							85541.457	36575.486	114.148
							85541.456	36575.487	114.149
							85541.457	36575.486	114.148
3D Prism	C305-RP081510	02-12-13	Installed	85542.928	36570.489	113.906	85542.928	36570.489	113.906
							85542.928	36570.489	113.906
							85542.928	36570.490	113.906
							85542.928	36570.489	113.906
3D Prism	C305-RP081702	12-12-13	Installed	85510.675	36622.854	117.956	85510.675	36622.854	117.956
							85510.675	36622.855	117.956
							85510.674	36622.854	117.955
							85510.675	36622.855	117.956
3D Prism	C305-RP081704	12-12-13	Installed	85490.264	36616.612	118.346	85490.264	36616.612	118.346
							85490.263	36616.611	118.345
							85490.264	36616.612	118.346
							85490.264	36616.611	118.345
3D Prism	C305-RP081802	12-12-13	Installed	85448.958	36605.124	114.842	85448.958	36605.124	114.842
							85448.957	36605.124	114.842
							85448.958	36605.123	114.841
							85448.957	36605.124	114.842

IRS Installation Record Sheets - Retro Targets									
Sensor Type	Sensor ID	Date Installation	Status	Sensor Location - GPS Reading			Commisioning Readings (m)		
				Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	Eastings X (m)	Northings Y (m)	Elevation Z (mATD)
								02-12-13	
Retro Target	C305-RR081507	02-12-13	Installed	85524.918	36571.103	123.518	85524.918	36571.103	123.518
							85524.919	36571.103	123.518
							85524.918	36571.102	123.518
							85524.918	36571.103	123.518
Retro Target	C305-RR081508	02-12-13	Installed	85533.944	36573.777	123.500	85533.944	36573.777	123.500
							85533.945	36573.777	123.501
							85533.944	36573.778	123.500
							85533.944	36573.777	123.500
								14-01-14	
Retro Target	C305-RR081605	02-12-13	Installed	85493.210	36561.694	123.505	85493.210	36561.694	123.505
							85493.210	36561.695	123.505
							85493.210	36561.694	123.505
							85493.210	36561.695	123.505
Retro Target	C305-RR081606	02-12-13	Installed	85502.282	36564.394	123.514	85502.282	36564.394	123.514
							85502.282	36564.394	123.514
							85502.281	36564.393	123.515
							85502.282	36564.393	123.514
Retro Target	C305-RR081607	02-12-13	Installed	85511.321	36567.074	123.544	85511.321	36567.074	123.544
							85511.321	36567.073	123.544
							85511.322	36567.074	123.543
							85511.321	36567.074	123.544
								02-12-13	
Retro Target	C305-RR081805	12-12-13	Installed	85425.477	36599.038	114.971	85425.477	36599.038	114.971
							85425.477	36599.038	114.971
							85425.477	36599.038	114.971
							85425.478	36599.037	114.971
Retro Target	C305-RR081807	12-12-13	Installed	85423.934	36601.134	114.929	85423.934	36601.134	114.929
							85423.935	36601.134	114.929
							85423.934	36601.135	114.929
							85423.935	36601.134	114.929
Retro Target	C305-RR081901	16-12-13	Installed	85400.258	36636.479	114.992	85400.258	36636.479	114.992
							85400.258	36636.480	114.992
							85400.257	36636.479	114.993
							85400.258	36636.479	114.992
Retro Target	C305-RR081902	16-12-13	Installed	85400.832	36616.253	115.055	85400.832	36616.253	115.055

IRS Installation Record Sheets - Retro Targets									
Sensor Type	Sensor ID	Date Installation	Status	Sensor Location - GPS Reading			Commisioning Readings (m)		
				Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	Eastings X (m)	Northings Y (m)	Elevation Z (mATD)
							85400.831	36616.252	115.055
							85400.832	36616.253	115.055
							85400.832	36616.252	115.055
Retro Target	C305-RR081903	16-12-13	Installed	85400.849	36595.495	115.011	85400.849	36595.495	115.011
							85400.849	36595.494	115.011
							85400.849	36595.495	115.011
							85400.850	36595.495	115.011
Retro Target	C305-RR081905	12-12-13	Installed	85400.038	36589.059	115.044	85400.038	36589.059	115.044
							85400.038	36589.059	115.043
							85400.037	36589.058	115.044
							85400.038	36589.058	115.044

IRS Installation Record Sheets – Sockets										
Sensor Type	Sensor ID	Date Installation	Status	Sensor Location - GPS Reading			Commisioning Readings (m)			
				Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	Average	Elevation Z1 (mATD)	Elevation Z2 (mATD)	Elevation Z3 (mATD)
							19-11-13			
Socket	C305-LB080100	15-11-13	Installed	85888.477	36424.273	111.003	111.003	111.003	111.004	111.004
Socket	C305-LB080101	15-11-13	Installed	85889.496	36431.778	111.091	111.091	111.091	111.090	111.091
Socket	C305-LB080102	15-11-13	Installed	85890.359	36438.128	111.086	111.086	111.085	111.086	111.086
Socket	C305-LB080103	15-11-13	Installed	85891.170	36444.105	111.151	111.151	111.150	111.151	111.151
Socket	C305-LB080104	15-11-13	Installed	85896.246	36448.984	111.147	111.147	111.148	111.147	111.147
Socket	C305-LB080201	15-11-13	Installed	85882.238	36453.409	111.077	111.077	111.077	111.077	111.077
Socket	C305-LB080202	15-11-13	Installed	85881.281	36445.819	110.982	110.982	110.982	110.981	110.982
Socket	C305-LB080210	15-11-13	Installed	85792.466	36458.674	111.002	111.002	111.001	111.002	111.002
Socket	C305-LB080211	15-11-13	Installed	85793.697	36467.662	111.069	111.069	111.068	111.069	111.068
Socket	C305-LB080212	15-11-13	Installed	85803.819	36466.368	111.031	111.031	111.031	111.031	111.031
Socket	C305-LB080213	15-11-13	Installed	85817.411	36464.441	111.046	111.046	111.047	111.046	111.046
Socket	C305-LB080214	15-11-13	Installed	85833.100	36462.217	111.039	111.039	111.039	111.039	111.039
Socket	C305-LB080215	15-11-13	Installed	85847.479	36460.178	111.023	111.023	111.023	111.024	111.023
Socket	C305-LB080216	15-11-13	Installed	85853.158	36459.373	111.061	111.061	111.061	111.060	111.061
Socket	C305-LB080217	15-11-13	Installed	85862.599	36457.979	111.049	111.049	111.049	111.049	111.049
Socket	C305-LB080218	15-11-13	Installed	85877.387	36455.840	111.063	111.063	111.063	111.062	111.063
							27-11-13			
Socket	C305-LB080301	22-11-13	Installed	85851.473	36368.788	111.127	111.127	111.126	111.127	111.127
Socket	C305-LB080302	22-11-13	Installed	85845.528	36376.003	111.124	111.124	111.124	111.123	111.124
Socket	C305-LB080303	22-11-13	Installed	85829.586	36378.377	111.197	111.197	111.196	111.197	111.196

IRS Installation Record Sheets – Sockets										
Sensor Type	Sensor ID	Date Installation	Status	Sensor Location - GPS Reading			Commisioning Readings (m)			
				Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	Average	Elevation Z1 (mATD)	Elevation Z2 (mATD)	Elevation Z3 (mATD)
Socket	C305-LB080304	22-11-13	Installed	85819.900	36372.685	111.134	111.134	111.134	111.135	111.135
Socket	C305-LB080305	22-11-13	Installed	85833.151	36408.352	111.034	111.034	111.034	111.035	111.034
Socket	C305-LB080306	22-11-13	Installed	85835.621	36423.672	110.957	110.957	110.958	110.957	110.957
Socket	C305-LB080307	22-11-13	Installed	85856.872	36417.427	110.965	110.965	110.964	110.965	110.964
Socket	C305-LB080308	22-11-13	Installed	85848.891	36406.655	110.976	110.976	110.976	110.976	110.975
Socket	C305-LB080309	22-11-13	Installed	85845.455	36387.991	111.050	111.050	111.050	111.050	111.050
							19-11-13			
Socket	C305-LB080401	15-11-13	Installed	85800.961	36439.190	110.908	110.908	110.908	110.908	110.908
Socket	C305-LB080402	02-12-13	Installed	85796.518	36440.448	110.980	110.980	110.980	110.981	110.980
Socket	C305-LB080403	19-11-13	Installed	85784.256	36438.050	111.155	111.155	111.155	111.155	111.155
Socket	C305-LB080404	19-11-13	Installed	85782.677	36413.838	111.406	111.406	111.406	111.407	111.406
Socket	C305-LB080501	19-11-13	Installed	85782.052	36408.659	111.369	111.369	111.370	111.369	111.369
Socket	C305-LB080601	15-11-13	Installed	85760.531	36404.543	111.344	111.344	111.343	111.345	111.344
Socket	C305-LB080602	15-11-13	Installed	85752.592	36419.958	111.420	111.420	111.420	111.421	111.420
Socket	C305-LB080603	15-11-13	Installed	85760.963	36410.673	111.299	111.299	111.299	111.300	111.300
Socket	C305-LB080604	15-11-13	Installed	85761.612	36418.478	111.297	111.297	111.297	111.296	111.296
Socket	C305-LB080701	15-11-13	Installed	85761.999	36423.492	111.339	111.339	111.338	111.339	111.339
Socket	C305-LB080702	15-11-13	Installed	85752.802	36423.791	111.415	111.415	111.415	111.415	111.415
Socket	C305-LB080703	19-11-13	Installed	85740.323	36432.595	111.482	111.482	111.482	111.482	111.482
Socket	C305-LB080705	15-11-13	Installed	85712.131	36453.952	111.351	111.351	111.352	111.351	111.351
Socket	C305-LB080706	15-11-13	Installed	85717.941	36453.646	111.297	111.297	111.297	111.297	111.298
Socket	C305-LB080707	15-11-13	Installed	85727.165	36453.015	111.220	111.220	111.221	111.220	111.220
Socket	C305-LB080708	15-11-13	Installed	85737.159	36452.331	111.140	111.140	111.139	111.140	111.139
Socket	C305-LB080709	15-11-13	Installed	85746.682	36451.682	111.152	111.152	111.153	111.152	111.153
Socket	C305-LB080710	15-11-13	Installed	85754.499	36449.575	111.182	111.182	111.182	111.182	111.182
Socket	C305-LB080711	15-11-13	Installed	85758.587	36449.272	111.182	111.182	111.182	111.181	111.182
Socket	C305-LB080712	15-11-13	Installed	85763.722	36448.782	111.266	111.266	111.266	111.266	111.266
Socket	C305-LB080713	15-11-13	Installed	85762.911	36436.850	111.215	111.215	111.215	111.215	111.215
Socket	C305-LB080801	18-11-13	Installed	85782.708	36498.961	111.147	111.147	111.147	111.148	111.148
Socket	C305-LB080802	18-11-13	Installed	85766.150	36487.402	111.080	111.080	111.080	111.081	111.080
Socket	C305-LB080803	18-11-13	Installed	85751.269	36482.000	111.246	111.246	111.246	111.245	111.245
Socket	C305-LB080804	18-11-13	Installed	85752.243	36497.618	111.218	111.218	111.218	111.219	111.218
							10-12-13			
Socket	C305-LB080901	06-12-13	Installed	85738.531	36479.811	111.148	111.148	111.148	111.148	111.148
Socket	C305-LB080902	06-12-13	Installed	85731.985	36475.520	111.081	111.081	111.081	111.081	111.081
Socket	C305-LB080903	06-12-13	Installed	85718.623	36475.380	111.246	111.246	111.245	111.246	111.246
Socket	C305-LB080904	06-12-13	Installed	85731.618	36499.555	111.218	111.218	111.219	111.218	111.219
Socket	C305-LB080905	06-12-13	Installed	85739.471	36498.758	111.227	111.227	111.226	111.227	111.227

IRS Installation Record Sheets – Sockets										
Sensor Type	Sensor ID	Date Installation	Status	Sensor Location - GPS Reading			Commisioning Readings (m)			
				Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	Average	Elevation Z1 (mATD)	Elevation Z2 (mATD)	Elevation Z3 (mATD)
							19-11-13			
Socket	C305-LB081001	18-11-13	Installed	85739.732	36570.620	111.251	111.251	111.252	111.251	111.251
Socket	C305-LB081002	18-11-13	Installed	85739.160	36561.827	111.251	111.251	111.250	111.251	111.251
Socket	C305-LB081003	18-11-13	Installed	85738.621	36552.978	111.255	111.255	111.255	111.255	111.254
Socket	C305-LB081004	18-11-13	Installed	85738.066	36544.096	111.247	111.247	111.246	111.247	111.247
Socket	C305-LB081005	18-11-13	Installed	85737.823	36540.623	111.254	111.254	111.254	111.254	111.254
Socket	C305-LB081006	18-11-13	Installed	85737.303	36531.742	111.317	111.317	111.317	111.318	111.317
Socket	C305-LB081007	18-11-13	Installed	85736.582	36522.667	111.248	111.248	111.249	111.248	111.248
Socket	C305-LB081008	18-11-13	Installed	85736.145	36513.626	111.244	111.244	111.244	111.245	111.244
Socket	C305-LB081009	18-11-13	Installed	85735.470	36504.736	111.178	111.178	111.178	111.178	111.178
Socket	C305-LB081010	18-11-13	Installed	85727.065	36505.285	111.174	111.174	111.174	111.173	111.174
Socket	C305-LB081014	02-12-13	Installed	85727.469	36544.569	111.324	111.324	111.324	111.324	111.324
							25-11-13			
Socket	C305-LB081101	18-11-13	Installed	85693.526	36479.743	111.689	111.689	111.690	111.689	111.689
Socket	C305-LB081102	18-11-13	Installed	85683.179	36480.819	111.695	111.695	111.696	111.695	111.695
Socket	C305-LB081104	18-11-13	Installed	85668.206	36499.516	111.604	111.604	111.604	111.604	111.604
Socket	C305-LB081105	18-11-13	Installed	85662.539	36516.604	111.388	111.388	111.387	111.388	111.388
Socket	C305-LB081106	18-11-13	Installed	85658.516	36532.605	111.248	111.248	111.248	111.248	111.249
Socket	C305-LB081107	18-11-13	Installed	85655.172	36545.855	111.313	111.313	111.312	111.313	111.313
Socket	C305-LB081109	06-12-13	Installed	85645.539	36580.737	111.610	111.610	111.610	111.610	111.610
Socket	C305-LB081110	06-12-13	Installed	85641.658	36594.637	111.794	111.794	111.793	111.794	111.793
							10-12-13			
Socket	C305-LB081301	03-12-13	Installed	85614.940	36602.884	112.222	112.222	112.222	112.223	112.222
Socket	C305-LB081302	03-12-13	Installed	85596.805	36600.271	112.099	112.099	112.099	112.099	112.099
Socket	C305-LB081303	03-12-13	Installed	85582.995	36595.532	112.140	112.140	112.141	112.140	112.141
Socket	C305-LB081401	03-12-13	Installed	85552.047	36584.953	112.197	112.197	112.196	112.197	112.197
Socket	C305-LB081402	02-12-13	Installed	85550.624	36575.810	111.970	111.970	111.969	111.970	111.970
Socket	C305-LB081501	02-12-13	Installed	85551.776	36519.832	111.894	111.894	111.894	111.893	111.894
Socket	C305-LB081502	02-12-13	Installed	85536.608	36531.512	111.977	111.977	111.978	111.977	111.978
Socket	C305-LB081503	02-12-13	Installed	85535.507	36539.153	111.992	111.992	111.991	111.992	111.992
Socket	C305-LB081504	02-12-13	Installed	85533.419	36545.679	111.973	111.973	111.972	111.973	111.973
Socket	C305-LB081505	02-12-13	Installed	85531.857	36551.355	111.962	111.962	111.962	111.962	111.962
Socket	C305-LB081506	02-12-13	Installed	85523.323	36560.531	111.956	111.956	111.955	111.956	111.955
Socket	C305-LB081507	02-12-13	Installed	85520.326	36568.032	112.180	112.180	112.181	112.180	112.180
Socket	C305-LB081508	02-12-13	Installed	85541.978	36574.361	112.108	112.108	112.109	112.108	112.109
Socket	C305-LB081509	02-12-13	Installed	85543.926	36569.181	112.033	112.033	112.033	112.032	112.033
Socket	C305-LB081510	02-12-13	Installed	85541.695	36565.608	112.174	112.174	112.174	112.175	112.174
Socket	C305-LB081511	02-12-13	Installed	85550.093	36544.303	111.905	111.905	111.904	111.905	111.905

IRS Installation Record Sheets – Sockets										
Sensor Type	Sensor ID	Date Installation	Status	Sensor Location - GPS Reading			Commisioning Readings (m)			
				Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	Average	Elevation Z1 (mATD)	Elevation Z2 (mATD)	Elevation Z3 (mATD)
Socket	C305-LB081601	06-12-13	Installed	85527.851	36525.229	111.036	111.036	111.035	111.036	111.036
Socket	C305-LB081602	06-12-13	Installed	85478.983	36525.804	111.150	111.150	111.150	111.151	111.151
Socket	C305-LB081603	06-12-13	Installed	85476.861	36536.211	111.077	111.077	111.077	111.077	111.077
Socket	C305-LB081604	06-12-13	Installed	85475.035	36545.012	111.052	111.052	111.053	111.052	111.052
Socket	C305-LB081605	02-12-13	Installed	85489.122	36558.912	112.036	112.036	112.036	112.037	112.036
Socket	C305-LB081606	02-12-13	Installed	85503.359	36563.053	112.100	112.100	112.100	112.099	112.099
Socket	C305-LB081607	02-12-13	Installed	85516.900	36566.991	112.183	112.183	112.183	112.184	112.184
Socket	C305-LB081608	02-12-13	Installed	85519.213	36559.268	111.951	111.951	111.951	111.951	111.951
									06-12-13	
Socket	C305-LB081701	02-12-13	Installed	85520.247	36625.991	112.853	112.853	112.853	112.854	112.853
Socket	C305-LB081702	02-12-13	Installed	85509.515	36622.798	112.865	112.865	112.864	112.865	112.865
Socket	C305-LB081703	02-12-13	Installed	85499.460	36619.807	112.865	112.865	112.866	112.865	112.865
Socket	C305-LB081704	02-12-13	Installed	85489.917	36616.953	112.788	112.788	112.788	112.787	112.788
Socket	C305-LB081705	06-12-13	Installed	85520.159	36627.648	112.609	112.609	112.610	112.609	112.610
Socket	C305-LB081802	04-12-13	Installed	85465.096	36610.789	112.794	112.794	112.794	112.793	112.794
Socket	C305-LB081803	04-12-13	Installed	85458.337	36608.707	112.685	112.685	112.685	112.685	112.685
Socket	C305-LB081804	04-12-13	Installed	85448.495	36605.799	112.612	112.612	112.613	112.612	112.612
Socket	C305-LB081805	06-12-13	Installed	85426.160	36599.497	112.647	112.647	112.647	112.647	112.648
Socket	C305-LB081806	06-12-13	Installed	85424.622	36601.174	112.208	112.208	112.208	112.207	112.208
Socket	C305-LB081807	04-12-13	Installed	85423.988	36609.571	112.213	112.213	112.213	112.213	112.213
Socket	C305-LB081808	04-12-13	Installed	85423.280	36619.652	112.205	112.205	112.205	112.206	112.205
Socket	C305-LB081809	04-12-13	Installed	85421.726	36639.323	112.383	112.383	112.383	112.382	112.383
Socket	C305-LB081810	04-12-13	Installed	85420.932	36649.943	112.431	112.431	112.431	112.431	112.431
Socket	C305-LB081901	04-12-13	Installed	85400.240	36638.359	112.470	112.470	112.471	112.470	112.469
Socket	C305-LB081902	04-12-13	Installed	85400.535	36628.281	112.385	112.385	112.385	112.384	112.385
Socket	C305-LB081903	04-12-13	Installed	85400.212	36618.123	112.444	112.444	112.444	112.445	112.444
Socket	C305-LB081904	04-12-13	Installed	85400.355	36597.305	112.409	112.409	112.409	112.409	112.409
Socket	C305-LB081905	04-12-13	Installed	85398.385	36589.339	112.762	112.762	112.762	112.763	112.762
Socket	C305-LB081906	13-12-13	Installed	85384.911	36600.183	112.308	112.308	112.309	112.308	112.309
									13-12-13	
Socket	C305-LB082004	13-12-13	Installed	85375.771	36606.563	112.166	112.166	112.166	112.167	112.166
Socket	C305-LB082005	13-12-13	Installed	85374.728	36628.837	111.952	111.952	111.951	111.952	111.952
Socket	C305-LB082006	13-12-13	Installed	85374.294	36645.034	111.941	111.941	111.941	111.941	111.940
									06-12-13	
Socket	C305-LB082101	02-12-13	Installed	85366.622	36579.491	112.974	112.974	112.974	112.974	112.974
Socket	C305-LB082102	02-12-13	Installed	85354.474	36575.559	112.988	112.988	112.989	112.987	112.988
Socket	C305-LB082103	02-12-13	Installed	85338.617	36570.415	112.998	112.998	112.998	112.997	112.998
Socket	C305-LB082104	13-12-13	Installed	85342.853	36589.739	112.381	112.381	112.381	112.381	112.381

IRS Installation Record Sheets – Sockets										
Sensor Type	Sensor ID	Date Installation	Status	Sensor Location - GPS Reading			Commisioning Readings (m)			
				Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	Average	Elevation Z1 (mATD)	Elevation Z2 (mATD)	Elevation Z3 (mATD)
Socket	C305-LB082105	13-12-13	Installed	85360.913	36596.986	112.312	112.312	112.313	112.312	112.312
							13-12-13			
Socket	C305-LB082201	13-12-13	Installed	85358.995	36644.733	112.280	112.280	112.280	112.280	112.280
Socket	C305-LB082202	13-12-13	Installed	85360.873	36628.043	112.290	112.290	112.290	112.290	112.290
Socket	C305-LB082203	13-12-13	Installed	85360.128	36611.351	112.251	112.251	112.251	112.250	112.250

IRS Installation Record Sheets – Levelling Points										
Sensor Type	Sensor ID	Date Installation	Status	Sensor Location - GPS Reading			Commisioning Readings (m)			
				Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	Average	Elevation Z1 (mATD)	Elevation Z2 (mATD)	Elevation Z3 (mATD)
							30-10-13			
Levelling Point	C305-LP081001	28-10-13	Installed	86073.169	36234.488	109.823	109.823	109.823	109.823	109.823
Levelling Point	C305-LP081002	28-10-13	Installed	86068.232	36234.902	109.810	109.810	109.810	109.810	109.810
Levelling Point	C305-LP081003	28-10-13	Installed	86063.309	36235.395	109.830	109.830	109.830	109.829	109.830
Levelling Point	C305-LP081004	28-10-13	Installed	86058.298	36235.950	109.824	109.824	109.823	109.824	109.824
Levelling Point	C305-LP081005	28-10-13	Installed	86053.358	36236.814	109.773	109.773	109.773	109.772	109.773
Levelling Point	C305-LP081006	28-10-13	Installed	86048.465	36237.826	109.744	109.744	109.744	109.744	109.744
Levelling Point	C305-LP081007	28-10-13	Installed	86043.619	36239.030	109.741	109.742	109.741	109.742	109.742
Levelling Point	C305-LP081008	28-10-13	Installed	86038.833	36240.312	109.766	109.766	109.766	109.766	109.766
Levelling Point	C305-LP081009	28-10-13	Installed	86034.047	36241.723	109.807	109.807	109.807	109.807	109.806
Levelling Point	C305-LP081010	28-10-13	Installed	86029.195	36243.104	109.807	109.807	109.807	109.807	109.807
Levelling Point	C305-LP081011	28-10-13	Installed	86024.522	36244.816	109.799	109.800	109.800	109.799	109.800
Levelling Point	C305-LP081012	28-10-13	Installed	86019.817	36246.595	109.771	109.771	109.771	109.771	109.771
Levelling Point	C305-LP081013	28-10-13	Installed	86015.212	36248.455	109.718	109.718	109.717	109.718	109.718
Levelling Point	C305-LP081014	28-10-13	Installed	86010.509	36249.948	109.679	109.679	109.680	109.679	109.680
Levelling Point	C305-LP081015	28-10-13	Installed	86005.630	36250.845	109.705	109.705	109.706	109.705	109.706
Levelling Point	C305-LP081016	28-10-13	Installed	86000.699	36251.000	109.709	109.710	109.710	109.709	109.710
Levelling Point	C305-LP081017	28-10-13	Installed	85995.897	36249.789	109.681	109.682	109.682	109.681	109.682
Levelling Point	C305-LP081018	28-10-13	Installed	85991.232	36248.136	109.654	109.654	109.654	109.654	109.654
							01-11-13			
Levelling Point	C305-LP081101	28-10-13	Installed	85985.062	36279.943	109.387	109.387	109.388	109.387	109.387
Levelling Point	C305-LP081102	28-10-13	Installed	85985.722	36284.983	109.382	109.382	109.383	109.382	109.382
Levelling Point	C305-LP081103	28-10-13	Installed	85986.055	36289.971	109.396	109.396	109.396	109.396	109.397
Levelling Point	C305-LP081104	28-10-13	Installed	85986.168	36294.899	109.409	109.409	109.409	109.408	109.409
Levelling Point	C305-LP081105	28-10-13	Installed	85986.357	36299.895	109.407	109.407	109.408	109.407	109.408

IRS Installation Record Sheets – Levelling Points										
Sensor Type	Sensor ID	Date Installation	Status	Sensor Location - GPS Reading			Commisioning Readings (m)			
				Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	Average	Elevation Z1 (mATD)	Elevation Z2 (mATD)	Elevation Z3 (mATD)
Levelling Point	C305-LP081106	28-10-13	Installed	85986.423	36304.925	109.422	109.422	109.421	109.422	109.422
Levelling Point	C305-LP081107	28-10-13	Installed	85986.303	36309.882	109.444	109.444	109.444	109.444	109.444
Levelling Point	C305-LP081108	28-10-13	Installed	85985.819	36314.854	109.478	109.478	109.479	109.478	109.478
Levelling Point	C305-LP081109	28-10-13	Installed	85985.482	36317.392	109.503	109.503	109.503	109.502	109.503
Levelling Point	C305-LP081110	28-10-13	Installed	85985.166	36319.856	109.521	109.521	109.521	109.522	109.521
Levelling Point	C305-LP081111	28-10-13	Installed	85984.750	36322.327	109.532	109.532	109.533	109.532	109.532
Levelling Point	C305-LP081112	28-10-13	Installed	85984.324	36324.879	109.544	109.544	109.545	109.544	109.544
Levelling Point	C305-LP081113	28-10-13	Installed	85983.892	36327.368	109.549	109.549	109.549	109.549	109.549
Levelling Point	C305-LP081114	28-10-13	Installed	85983.466	36329.784	109.556	109.556	109.556	109.556	109.556
Levelling Point	C305-LP081115	28-10-13	Installed	85983.042	36332.231	109.581	109.581	109.582	109.581	109.581
Levelling Point	C305-LP081116	28-10-13	Installed	85982.721	36334.704	109.580	109.581	109.581	109.580	109.581
Levelling Point	C305-LP081117	28-10-13	Installed	85982.488	36337.227	109.598	109.598	109.597	109.598	109.598
Levelling Point	C305-LP081118	28-10-13	Installed	85982.158	36339.642	109.601	109.601	109.601	109.601	109.601
Levelling Point	C305-LP081119	28-10-13	Installed	85981.764	36342.081	109.604	109.604	109.604	109.604	109.604
Levelling Point	C305-LP081120	28-10-13	Installed	85981.416	36344.588	109.603	109.603	109.603	109.603	109.603
Levelling Point	C305-LP081121	28-10-13	Installed	85981.084	36347.049	109.611	109.611	109.611	109.612	109.611
Levelling Point	C305-LP081122	28-10-13	Installed	85981.587	36349.532	109.615	109.615	109.616	109.615	109.615
Levelling Point	C305-LP081123	28-10-13	Installed	85982.183	36351.968	109.621	109.621	109.622	109.621	109.621
Levelling Point	C305-LP081124	28-10-13	Installed	85982.677	36354.413	109.616	109.616	109.616	109.615	109.616
Levelling Point	C305-LP081125	28-10-13	Installed	85983.245	36356.863	109.621	109.621	109.621	109.621	109.621
Levelling Point	C305-LP081126	28-10-13	Installed	85983.746	36359.157	109.605	109.605	109.605	109.606	109.605
Levelling Point	C305-LP081127	28-10-13	Installed	85984.203	36361.772	109.590	109.590	109.590	109.591	109.590
Levelling Point	C305-LP081128	28-10-13	Installed	85984.552	36364.409	109.577	109.577	109.577	109.577	109.577
Levelling Point	C305-LP081129	28-10-13	Installed	85984.727	36366.908	109.605	109.605	109.605	109.606	109.606
Levelling Point	C305-LP081130	28-10-13	Installed	85985.526	36369.759	109.604	109.605	109.604	109.605	109.604
Levelling Point	C305-LP081131	28-10-13	Installed	85986.151	36372.706	109.564	109.564	109.564	109.564	109.565
Levelling Point	C305-LP081132	28-10-13	Installed	85988.036	36378.422	109.483	109.483	109.483	109.482	109.482
Levelling Point	C305-LP081133	28-10-13	Installed	85989.588	36388.533	109.651	109.651	109.651	109.651	109.651
							31-10-13			
Levelling Point	C305-LP081201	28-10-13	Installed	85975.351	36362.961	109.579	109.579	109.579	109.580	109.579
Levelling Point	C305-LP081202	28-10-13	Installed	85970.370	36361.546	109.552	109.552	109.552	109.553	109.552
Levelling Point	C305-LP081203	28-10-13	Installed	85966.868	36365.155	109.530	109.530	109.530	109.531	109.530
Levelling Point	C305-LP081204	28-10-13	Installed	85963.021	36368.293	109.536	109.536	109.536	109.535	109.536
Levelling Point	C305-LP081205	28-10-13	Installed	85959.048	36371.260	109.525	109.525	109.525	109.525	109.526
Levelling Point	C305-LP081206	28-10-13	Installed	85954.874	36373.952	109.575	109.575	109.576	109.574	109.575
Levelling Point	C305-LP081207	29-10-13	Installed	85950.535	36376.465	109.671	109.671	109.672	109.671	109.671
Levelling Point	C305-LP081208	29-10-13	Installed	85946.196	36379.013	109.721	109.721	109.721	109.721	109.721
Levelling Point	C305-LP081209	29-10-13	Installed	85941.760	36381.276	109.777	109.777	109.777	109.777	109.777

IRS Installation Record Sheets – Levelling Points										
Sensor Type	Sensor ID	Date Installation	Status	Sensor Location - GPS Reading			Commisioning Readings (m)			
				Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	Average	Elevation Z1 (mATD)	Elevation Z2 (mATD)	Elevation Z3 (mATD)
Levelling Point	C305-LP081210	29-10-13	Installed	85937.323	36383.538	109.776	109.776	109.775	109.776	109.776
Levelling Point	C305-LP081211	29-10-13	Installed	85932.546	36385.139	109.747	109.747	109.748	109.747	109.748
Levelling Point	C305-LP081212	29-10-13	Installed	85927.577	36385.671	109.747	109.747	109.747	109.746	109.747
Levelling Point	C305-LP081213	29-10-13	Installed	85922.577	36385.615	109.761	109.761	109.761	109.760	109.761
Levelling Point	C305-LP081214	29-10-13	Installed	85918.079	36386.893	109.769	109.769	109.769	109.769	109.769
Levelling Point	C305-LP081215	29-10-13	Installed	85919.047	36392.509	109.695	109.695	109.696	109.695	109.696
Levelling Point	C305-LP081216	29-10-13	Installed	85918.785	36397.746	109.616	109.616	109.615	109.616	109.615
Levelling Point	C305-LP081217	29-10-13	Installed	85914.163	36399.567	109.596	109.596	109.597	109.596	109.596
Levelling Point	C305-LP081218	29-10-13	Installed	85909.690	36401.686	109.537	109.537	109.537	109.537	109.536
Levelling Point	C305-LP081219	29-10-13	Installed	85905.088	36403.727	109.491	109.491	109.491	109.490	109.490
Levelling Point	C305-LP081220	29-10-13	Installed	85900.665	36405.949	109.472	109.472	109.472	109.473	109.473
Levelling Point	C305-LP081221	29-10-13	Installed	85896.193	36408.107	109.455	109.455	109.456	109.455	109.455
Levelling Point	C305-LP081222	29-10-13	Installed	85891.735	36410.274	109.419	109.419	109.418	109.419	109.419
Levelling Point	C305-LP081223	29-10-13	Installed	85887.275	36412.551	109.411	109.411	109.411	109.411	109.412
Levelling Point	C305-LP081224	29-10-13	Installed	85882.758	36414.693	109.412	109.412	109.411	109.412	109.412
							30-10-13			
Levelling Point	C305-LP081301	29-10-13	Installed	85967.626	36338.523	109.355	109.355	109.356	109.355	109.356
Levelling Point	C305-LP081302	29-10-13	Installed	85963.357	36341.127	109.376	109.376	109.376	109.376	109.376
Levelling Point	C305-LP081303	29-10-13	Installed	85959.084	36343.723	109.297	109.297	109.298	109.296	109.297
Levelling Point	C305-LP081304	29-10-13	Installed	85954.807	36346.313	109.294	109.294	109.294	109.294	109.295
Levelling Point	C305-LP081314	29-10-13	Installed	85911.826	36371.859	109.706	109.706	109.706	109.706	109.706
Levelling Point	C305-LP081315	29-10-13	Installed	85907.507	36374.377	109.723	109.723	109.724	109.723	109.723
Levelling Point	C305-LP081316	29-10-13	Installed	85903.184	36376.890	109.760	109.760	109.760	109.761	109.760
Levelling Point	C305-LP081317	29-10-13	Installed	85898.857	36379.395	109.736	109.736	109.736	109.735	109.736
Levelling Point	C305-LP081320	29-10-13	Installed	85885.853	36386.872	109.796	109.796	109.797	109.796	109.796
Levelling Point	C305-LP081321	29-10-13	Installed	85881.511	36389.352	109.723	109.723	109.723	109.723	109.723
Levelling Point	C305-LP081322	29-10-13	Installed	85877.165	36391.824	109.746	109.746	109.746	109.745	109.746
							31-10-13			
Levelling Point	C305-LP081401	29-10-13	Installed	85866.425	36359.816	109.920	109.920	109.921	109.920	109.920
Levelling Point	C305-LP081402	29-10-13	Installed	85866.141	36364.777	109.945	109.945	109.945	109.946	109.946
Levelling Point	C305-LP081403	29-10-13	Installed	85865.994	36369.821	109.973	109.973	109.973	109.974	109.973
Levelling Point	C305-LP081404	29-10-13	Installed	85865.983	36374.823	109.987	109.987	109.987	109.988	109.987
Levelling Point	C305-LP081405	29-10-13	Installed	85866.436	36379.786	109.969	109.969	109.969	109.969	109.969
Levelling Point	C305-LP081406	29-10-13	Installed	85866.889	36384.774	109.923	109.923	109.923	109.924	109.923
Levelling Point	C305-LP081407	29-10-13	Installed	85867.279	36387.233	109.899	109.899	109.900	109.899	109.899
Levelling Point	C305-LP081408	29-10-13	Installed	85867.728	36389.687	109.852	109.852	109.852	109.851	109.852
Levelling Point	C305-LP081409	29-10-13	Installed	85868.246	36392.095	109.818	109.818	109.818	109.818	109.818
Levelling Point	C305-LP081410	29-10-13	Installed	85868.772	36394.539	109.772	109.772	109.772	109.773	109.772

IRS Installation Record Sheets – Levelling Points										
Sensor Type	Sensor ID	Date Installation	Status	Sensor Location - GPS Reading			Commisioning Readings (m)			
				Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	Average	Elevation Z1 (mATD)	Elevation Z2 (mATD)	Elevation Z3 (mATD)
Levelling Point	C305-LP081411	29-10-13	Installed	85869.431	36396.969	109.736	109.736	109.736	109.736	109.736
Levelling Point	C305-LP081412	29-10-13	Installed	85870.069	36399.373	109.714	109.714	109.715	109.714	109.714
Levelling Point	C305-LP081413	29-10-13	Installed	85870.907	36401.697	109.679	109.679	109.678	109.679	109.679
Levelling Point	C305-LP081414	29-10-13	Installed	85871.659	36404.103	109.638	109.638	109.638	109.637	109.638
Levelling Point	C305-LP081415	29-10-13	Installed	85872.562	36406.432	109.584	109.584	109.584	109.583	109.584
Levelling Point	C305-LP081416	29-10-13	Installed	85873.431	36408.727	109.573	109.573	109.573	109.572	109.573
Levelling Point	C305-LP081417	29-10-13	Installed	85874.537	36410.967	109.556	109.556	109.557	109.556	109.556
Levelling Point	C305-LP081418	29-10-13	Installed	85875.622	36413.220	109.536	109.536	109.536	109.535	109.536
Levelling Point	C305-LP081419	29-10-13	Installed	85876.706	36415.472	109.478	109.478	109.478	109.478	109.479
								05-11-13		
Levelling Point	C305-LP081501	05-11-13	Installed	85887.313	36451.724	109.741	109.741	109.742	109.741	109.742
Levelling Point	C305-LP081502	05-11-13	Installed	85886.619	36446.773	109.750	109.750	109.750	109.749	109.750
Levelling Point	C305-LP081503	05-11-13	Installed	85885.924	36441.821	109.722	109.722	109.722	109.723	109.722
Levelling Point	C305-LP081504	05-11-13	Installed	85885.153	36437.022	109.671	109.671	109.672	109.671	109.671
Levelling Point	C305-LP081505	05-11-13	Installed	85880.324	36435.919	109.578	109.578	109.577	109.578	109.578
Levelling Point	C305-LP081506	05-11-13	Installed	85875.423	36435.494	109.512	109.512	109.512	109.512	109.512
Levelling Point	C305-LP081507	05-11-13	Installed	85873.684	36432.013	109.451	109.451	109.451	109.451	109.451
Levelling Point	C305-LP081508	05-11-13	Installed	85871.105	36428.493	109.429	109.429	109.430	109.429	109.430
Levelling Point	C305-LP081509	05-11-13	Installed	85866.611	36429.137	109.440	109.440	109.440	109.439	109.440
Levelling Point	C305-LP081510	05-11-13	Installed	85861.502	36431.169	109.404	109.404	109.404	109.404	109.404
Levelling Point	C305-LP081511	05-11-13	Installed	85856.881	36432.979	109.360	109.360	109.360	109.361	109.360
Levelling Point	C305-LP081512	05-11-13	Installed	85852.259	36434.818	109.357	109.357	109.357	109.357	109.357
Levelling Point	C305-LP081513	05-11-13	Installed	85847.537	36436.493	109.348	109.348	109.348	109.349	109.348
Levelling Point	C305-LP081514	05-11-13	Installed	85842.796	36438.185	109.323	109.323	109.323	109.324	109.323
Levelling Point	C305-LP081515	05-11-13	Installed	85838.082	36439.798	109.333	109.333	109.333	109.333	109.333
Levelling Point	C305-LP081516	05-11-13	Installed	85833.337	36441.302	109.315	109.315	109.315	109.316	109.315
Levelling Point	C305-LP081517	05-11-13	Installed	85828.522	36442.796	109.311	109.311	109.312	109.311	109.311
Levelling Point	C305-LP081518	05-11-13	Installed	85823.756	36444.196	109.327	109.327	109.327	109.327	109.328
Levelling Point	C305-LP081519	05-11-13	Installed	85818.944	36445.559	109.334	109.334	109.333	109.334	109.334
Levelling Point	C305-LP081520	05-11-13	Installed	85814.167	36446.937	109.348	109.348	109.348	109.349	109.348
Levelling Point	C305-LP081521	05-11-13	Installed	85809.349	36448.278	109.391	109.391	109.390	109.391	109.391
Levelling Point	C305-LP081601	05-11-13	Installed	85765.940	36413.849	110.129	110.129	110.128	110.129	110.129
Levelling Point	C305-LP081602	05-11-13	Installed	85766.294	36418.836	110.119	110.119	110.120	110.119	110.118
Levelling Point	C305-LP081603	05-11-13	Installed	85766.648	36423.823	110.078	110.078	110.078	110.077	110.078
Levelling Point	C305-LP081604	05-11-13	Installed	85767.002	36428.811	110.047	110.047	110.047	110.048	110.047
Levelling Point	C305-LP081605	05-11-13	Installed	85767.332	36433.800	110.019	110.019	110.020	110.019	110.019
Levelling Point	C305-LP081606	05-11-13	Installed	85767.678	36438.788	109.984	109.984	109.984	109.983	109.984
Levelling Point	C305-LP081607	05-11-13	Installed	85767.980	36441.282	109.962	109.962	109.962	109.962	109.962

IRS Installation Record Sheets – Levelling Points										
Sensor Type	Sensor ID	Date Installation	Status	Sensor Location - GPS Reading			Commisioning Readings (m)			
				Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	Average	Elevation Z1 (mATD)	Elevation Z2 (mATD)	Elevation Z3 (mATD)
Levelling Point	C305-LP081608	05-11-13	Installed	85768.282	36443.776	109.949	109.949	109.949	109.950	109.949
Levelling Point	C305-LP081609	05-11-13	Installed	85768.403	36446.285	109.944	109.944	109.944	109.945	109.944
Levelling Point	C305-LP081610	05-11-13	Installed	85768.549	36448.813	109.888	109.888	109.889	109.888	109.888
Levelling Point	C305-LP081611	05-11-13	Installed	85768.638	36451.107	109.860	109.860	109.861	109.860	109.860
Levelling Point	C305-LP081612	05-11-13	Installed	85766.511	36452.716	109.833	109.837	109.837	109.837	109.837
Levelling Point	C305-LP081613	05-11-13	Installed	85770.706	36458.147	109.658	109.658	109.657	109.658	109.658
Levelling Point	C305-LP081614	05-11-13	Installed	85771.197	36460.876	109.739	109.739	109.739	109.738	109.738
Levelling Point	C305-LP081615	05-11-13	Installed	85771.305	36463.374	109.768	109.768	109.768	109.767	109.767
Levelling Point	C305-LP081616	05-11-13	Installed	85771.589	36465.857	109.789	109.789	109.789	109.788	109.788
Levelling Point	C305-LP081617	05-11-13	Installed	85772.158	36470.825	109.790	109.790	109.789	109.790	109.789
Levelling Point	C305-LP081618	05-11-13	Installed	85772.727	36475.792	109.775	109.775	109.775	109.775	109.775
Levelling Point	C305-LP081619	05-11-13	Installed	85773.012	36478.276	109.780	109.780	109.780	109.780	109.780
Levelling Point	C305-LP081620	05-11-13	Installed	85773.336	36481.105	109.717	109.717	109.718	109.717	109.718
Levelling Point	C305-LP081621	05-11-13	Installed	85774.449	36483.384	109.673	109.673	109.673	109.672	109.673
Levelling Point	C305-LP081622	05-11-13	Installed	85772.094	36488.761	109.681	109.681	109.681	109.682	109.681
Levelling Point	C305-LP081623	05-11-13	Installed	85774.579	36490.315	109.680	109.680	109.680	109.679	109.680
Levelling Point	C305-LP081624	05-11-13	Installed	85776.256	36491.426	109.680	109.680	109.681	109.680	109.681
Levelling Point	C305-LP081625	05-11-13	Installed	85778.517	36492.728	109.671	109.671	109.671	109.671	109.671
Levelling Point	C305-LP081626	05-11-13	Installed	85780.535	36494.040	109.676	109.676	109.675	109.676	109.676
Levelling Point	C305-LP081627	05-11-13	Installed	85782.692	36495.375	109.661	109.661	109.661	109.661	109.661
Levelling Point	C305-LP081628	05-11-13	Installed	85784.778	36496.718	109.658	109.658	109.659	109.658	109.658
Levelling Point	C305-LP081629	05-11-13	Installed	85788.989	36499.350	109.645	109.645	109.645	109.645	109.645
Levelling Point	C305-LP081630	05-11-13	Installed	85793.228	36501.990	109.627	109.627	109.627	109.627	109.626
Levelling Point	C305-LP081631	05-11-13	Installed	85797.455	36504.666	109.632	109.632	109.632	109.633	109.632
Levelling Point	C305-LP081632	05-11-13	Installed	85801.643	36507.334	109.643	109.643	109.644	109.643	109.643
Levelling Point	C305-LP081633	05-11-13	Installed	85805.894	36509.882	109.662	109.662	109.662	109.661	109.662
Levelling Point	C305-LP081701	05-11-13	Installed	85739.722	36475.316	109.890	109.890	109.890	109.889	109.890
Levelling Point	C305-LP081702	05-11-13	Installed	85734.715	36475.259	109.986	109.986	109.986	109.986	109.986
Levelling Point	C305-LP081703	05-11-13	Installed	85729.901	36475.026	110.036	110.036	110.036	110.036	110.036
Levelling Point	C305-LP081704	05-11-13	Installed	85725.768	36474.952	110.092	110.092	110.092	110.092	110.092
Levelling Point	C305-LP081705	05-11-13	Installed	85720.276	36474.975	110.150	110.150	110.150	110.150	110.150
Levelling Point	C305-LP081706	05-11-13	Installed	85715.446	36474.931	110.228	110.228	110.228	110.228	110.229
Levelling Point	C305-LP081707	05-11-13	Installed	85710.704	36474.980	110.248	110.248	110.248	110.247	110.248
Levelling Point	C305-LP081708	05-11-13	Installed	85704.922	36474.368	110.270	110.270	110.270	110.270	110.270
Levelling Point	C305-LP081709	05-11-13	Installed	85700.376	36475.619	110.284	110.284	110.283	110.284	110.284
Levelling Point	C305-LP081710	05-11-13	Installed	85695.393	36476.088	110.289	110.289	110.288	110.289	110.289
Levelling Point	C305-LP081711	05-11-13	Installed	85690.605	36476.288	110.302	110.302	110.302	110.303	110.302
Levelling Point	C305-LP081712	05-11-13	Installed	85685.462	36477.067	110.328	110.328	110.328	110.328	110.328

IRS Installation Record Sheets – Levelling Points										
Sensor Type	Sensor ID	Date Installation	Status	Sensor Location - GPS Reading			Commisioning Readings (m)			
				Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	Average	Elevation Z1 (mATD)	Elevation Z2 (mATD)	Elevation Z3 (mATD)
Levelling Point	C305-LP081713	05-11-13	Installed	85680.547	36477.478	110.243	110.243	110.243	110.243	110.243
Levelling Point	C305-LP081714	05-11-13	Installed	85675.519	36478.147	110.267	110.267	110.268	110.266	110.267
Levelling Point	C305-LP081715	05-11-13	Installed	85670.549	36478.798	110.287	110.287	110.288	110.287	110.287
Levelling Point	C305-LP081801	05-11-13	Installed	85665.437	36478.040	110.275	110.275	110.274	110.275	110.275
Levelling Point	C305-LP081802	05-11-13	Installed	85664.555	36483.065	110.411	110.411	110.412	110.411	110.411
Levelling Point	C305-LP081803	05-11-13	Installed	85664.633	36485.532	110.512	110.512	110.512	110.512	110.512
Levelling Point	C305-LP081804	05-11-13	Installed	85664.673	36488.199	110.525	110.525	110.525	110.525	110.525
Levelling Point	C305-LP081805	05-11-13	Installed	85664.613	36490.540	110.493	110.493	110.494	110.493	110.493
Levelling Point	C305-LP081806	05-11-13	Installed	85664.623	36493.023	110.499	110.499	110.499	110.500	110.499
Levelling Point	C305-LP081807	05-11-13	Installed	85664.528	36495.542	110.338	110.338	110.338	110.338	110.337
Levelling Point	C305-LP081808	05-11-13	Installed	85664.593	36498.016	110.279	110.279	110.279	110.279	110.279
Levelling Point	C305-LP081809	05-11-13	Installed	85664.440	36500.507	110.322	110.322	110.322	110.323	110.322
Levelling Point	C305-LP081810	05-11-13	Installed	85663.960	36502.954	110.272	110.272	110.272	110.273	110.272
Levelling Point	C305-LP081811	05-11-13	Installed	85663.317	36505.347	110.234	110.234	110.234	110.235	110.234
Levelling Point	C305-LP081812	05-11-13	Installed	85662.606	36507.849	110.193	110.193	110.193	110.192	110.193
Levelling Point	C305-LP081813	05-11-13	Installed	85661.971	36510.267	110.146	110.146	110.145	110.146	110.146
Levelling Point	C305-LP081814	05-11-13	Installed	85661.344	36512.687	110.093	110.093	110.094	110.093	110.093
Levelling Point	C305-LP081815	05-11-13	Installed	85660.705	36515.104	110.046	110.046	110.046	110.047	110.046
Levelling Point	C305-LP081816	05-11-13	Installed	85660.052	36517.517	110.005	110.005	110.005	110.004	110.004
Levelling Point	C305-LP081817	05-11-13	Installed	85659.428	36519.938	109.974	109.974	109.973	109.974	109.974
Levelling Point	C305-LP081818	05-11-13	Installed	85658.786	36522.355	109.929	109.929	109.929	109.929	109.928
Levelling Point	C305-LP081819	05-11-13	Installed	85658.160	36524.775	109.881	109.881	109.881	109.881	109.881
Levelling Point	C305-LP081820	05-11-13	Installed	85657.657	36527.163	109.838	109.838	109.838	109.837	109.838
Levelling Point	C305-LP081821	05-11-13	Installed	85656.951	36529.522	109.857	109.857	109.857	109.857	109.857
Levelling Point	C305-LP081822	05-11-13	Installed	85656.325	36531.941	109.890	109.890	109.889	109.890	109.890
Levelling Point	C305-LP081823	05-11-13	Installed	85655.722	36534.369	109.906	109.906	109.906	109.906	109.907
Levelling Point	C305-LP081824	05-11-13	Installed	85655.249	36536.823	109.924	109.924	109.924	109.924	109.924
Levelling Point	C305-LP081825	05-11-13	Installed	85654.152	36541.702	109.975	109.975	109.975	109.975	109.975
Levelling Point	C305-LP081826	05-11-13	Installed	85652.875	36546.516	110.011	110.011	110.011	110.012	110.012
Levelling Point	C305-LP081827	05-11-13	Installed	85652.291	36548.922	110.031	110.031	110.031	110.031	110.031
Levelling Point	C305-LP081828	05-11-13	Installed	85651.629	36551.378	110.049	110.049	110.049	110.050	110.049
Levelling Point	C305-LP081829	05-11-13	Installed	85651.188	36553.890	109.981	109.981	109.981	109.981	109.982
Levelling Point	C305-LP081830	05-11-13	Installed	85650.824	36556.227	109.981	109.981	109.982	109.981	109.981
Levelling Point	C305-LP081831	05-11-13	Installed	85649.555	36559.140	110.137	110.137	110.137	110.137	110.137
Levelling Point	C305-LP081832	05-11-13	Installed	85649.020	36560.948	110.160	110.160	110.160	110.159	110.160
Levelling Point	C305-LP081833	05-11-13	Installed	85648.376	36563.261	110.179	110.179	110.179	110.180	110.179
Levelling Point	C305-LP081834	05-11-13	Installed	85647.682	36565.738	110.198	110.198	110.198	110.198	110.198
Levelling Point	C305-LP081835	05-11-13	Installed	85647.136	36568.183	110.224	110.224	110.224	110.225	110.225

IRS Installation Record Sheets – Levelling Points										
Sensor Type	Sensor ID	Date Installation	Status	Sensor Location - GPS Reading			Commisioning Readings (m)			
				Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	Average	Elevation Z1 (mATD)	Elevation Z2 (mATD)	Elevation Z3 (mATD)
Levelling Point	C305-LP081836	05-11-13	Installed	85646.657	36570.664	110.159	110.159	110.159	110.158	110.159
Levelling Point	C305-LP081837	05-11-13	Installed	85646.296	36573.138	110.189	110.189	110.190	110.189	110.190
Levelling Point	C305-LP081838	05-11-13	Installed	85646.050	36575.554	110.322	110.322	110.322	110.322	110.322
Levelling Point	C305-LP081839	05-11-13	Installed	85644.657	36580.473	110.418	110.418	110.417	110.418	110.418
Levelling Point	C305-LP081840	05-11-13	Installed	85642.173	36589.862	110.590	110.590	110.590	110.590	110.590
							07-11-13			
Levelling Point	C305-LP081901	06-11-13	Installed	85614.128	36611.363	110.670	110.670	110.670	110.670	110.670
Levelling Point	C305-LP081902	06-11-13	Installed	85609.014	36609.802	110.682	110.682	110.683	110.682	110.683
Levelling Point	C305-LP081903	06-11-13	Installed	85604.250	36608.280	110.709	110.709	110.709	110.709	110.710
Levelling Point	C305-LP081904	06-11-13	Installed	85599.712	36606.774	110.684	110.684	110.684	110.684	110.684
Levelling Point	C305-LP081905	06-11-13	Installed	85594.925	36605.337	110.707	110.707	110.707	110.707	110.707
Levelling Point	C305-LP081906	06-11-13	Installed	85590.162	36603.816	110.719	110.719	110.719	110.720	110.719
Levelling Point	C305-LP081907	06-11-13	Installed	85585.624	36602.310	110.708	110.708	110.708	110.708	110.708
Levelling Point	C305-LP081908	06-11-13	Installed	85581.077	36600.830	110.726	110.726	110.725	110.726	110.726
Levelling Point	C305-LP081909	06-11-13	Installed	85576.550	36599.359	110.724	110.724	110.724	110.725	110.724
Levelling Point	C305-LP081910	06-11-13	Installed	85571.406	36597.801	110.723	110.723	110.723	110.722	110.723
Levelling Point	C305-LP081911	06-11-13	Installed	85567.178	36596.440	110.633	110.633	110.633	110.633	110.633
Levelling Point	C305-LP081912	06-11-13	Installed	85562.201	36595.051	110.723	110.723	110.723	110.723	110.723
Levelling Point	C305-LP081913	06-11-13	Installed	85557.336	36593.567	110.726	110.726	110.726	110.726	110.726
Levelling Point	C305-LP081914	06-11-13	Installed	85552.655	36592.047	110.724	110.724	110.724	110.723	110.724
Levelling Point	C305-LP081915	06-11-13	Installed	85547.863	36590.622	110.760	110.761	110.760	110.761	110.761
Levelling Point	C305-LP081916	06-11-13	Installed	85543.032	36589.186	110.813	110.813	110.814	110.813	110.813
Levelling Point	C305-LP081917	06-11-13	Installed	85538.271	36587.661	110.815	110.815	110.815	110.816	110.815
Levelling Point	C305-LP081918	06-11-13	Installed	85533.478	36586.236	110.798	110.798	110.798	110.798	110.798
Levelling Point	C305-LP081919	06-11-13	Installed	85528.683	36584.819	110.790	110.790	110.790	110.790	110.791
Levelling Point	C305-LP081920	06-11-13	Installed	85523.849	36583.395	110.771	110.772	110.772	110.771	110.771
Levelling Point	C305-LP081921	06-11-13	Installed	85519.062	36581.950	110.775	110.775	110.775	110.775	110.775
Levelling Point	C305-LP081922	06-11-13	Installed	85514.270	36580.526	110.789	110.789	110.788	110.789	110.789
Levelling Point	C305-LP081923	06-11-13	Installed	85509.402	36579.078	110.743	110.743	110.743	110.744	110.743
Levelling Point	C305-LP081924	06-11-13	Installed	85504.641	36577.684	110.703	110.703	110.704	110.703	110.703
Levelling Point	C305-LP081925	06-11-13	Installed	85499.746	36576.316	110.680	110.680	110.680	110.679	110.680
Levelling Point	C305-LP081926	06-11-13	Installed	85494.959	36574.870	110.658	110.658	110.659	110.658	110.658
Levelling Point	C305-LP081927	06-11-13	Installed	85490.174	36573.424	110.636	110.636	110.636	110.637	110.636
Levelling Point	C305-LP081928	06-11-13	Installed	85485.382	36571.997	110.640	110.640	110.640	110.639	110.640
Levelling Point	C305-LP081929	06-11-13	Installed	85482.610	36568.029	110.736	110.736	110.736	110.737	110.736
Levelling Point	C305-LP081930	06-11-13	Installed	85477.849	36566.596	110.818	110.818	110.817	110.818	110.818
Levelling Point	C305-LP081931	06-11-13	Installed	85472.978	36565.352	110.833	110.833	110.833	110.833	110.833
Levelling Point	C305-LP081932	06-11-13	Installed	85468.194	36563.922	110.862	110.862	110.862	110.862	110.862

IRS Installation Record Sheets – Levelling Points										
Sensor Type	Sensor ID	Date Installation	Status	Sensor Location - GPS Reading			Commisioning Readings (m)			
				Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	Average	Elevation Z1 (mATD)	Elevation Z2 (mATD)	Elevation Z3 (mATD)
Levelling Point	C305-LP081933	06-11-13	Installed	85463.419	36562.348	110.925	110.926	110.925	110.926	110.925
Levelling Point	C305-LP081934	06-11-13	Installed	85458.584	36561.079	110.894	110.894	110.894	110.894	110.895
Levelling Point	C305-LP081935	06-11-13	Installed	85453.757	36559.774	110.902	110.902	110.903	110.902	110.902
Levelling Point	C305-LP081936	06-11-13	Installed	85448.946	36558.315	110.913	110.913	110.914	110.913	110.913
Levelling Point	C305-LP081937	06-11-13	Installed	85444.058	36556.895	110.935	110.935	110.936	110.935	110.935
Levelling Point	C305-LP081938	06-11-13	Installed	85439.399	36555.513	110.967	110.967	110.967	110.967	110.967
Levelling Point	C305-LP081939	06-11-13	Installed	85434.657	36554.106	111.013	111.014	111.014	111.013	111.014
Levelling Point	C305-LP081940	06-11-13	Installed	85429.692	36552.633	111.044	111.044	111.045	111.044	111.044
Levelling Point	C305-LP081941	06-11-13	Installed	85424.972	36551.232	111.064	111.064	111.064	111.063	111.064
Levelling Point	C305-LP081942	06-11-13	Installed	85420.137	36549.797	111.034	111.034	111.033	111.034	111.034
Levelling Point	C305-LP081943	06-11-13	Installed	85415.356	36548.379	111.019	111.019	111.019	111.018	111.019
Levelling Point	C305-LP081944	06-11-13	Installed	85410.512	36546.831	111.008	111.008	111.007	111.008	111.008
Levelling Point	C305-LP081945	06-11-13	Installed	85405.705	36545.455	111.020	111.020	111.019	111.020	111.020
Levelling Point	C305-LP081946	06-11-13	Installed	85400.887	36544.133	111.030	111.030	111.030	111.029	111.030
Levelling Point	C305-LP081947	06-11-13	Installed	85396.120	36542.607	111.027	111.027	111.028	111.027	111.026
Levelling Point	C305-LP081948	06-11-13	Installed	85391.310	36541.244	111.033	111.033	111.033	111.034	111.033
Levelling Point	C305-LP081949	06-11-13	Installed	85386.516	36539.821	111.064	111.064	111.064	111.063	111.064
Levelling Point	C305-LP081950	06-11-13	Installed	85381.635	36538.609	111.070	111.070	111.071	111.070	111.071
Levelling Point	C305-LP081951	06-11-13	Installed	85376.872	36537.076	111.089	111.090	111.089	111.090	111.090
Levelling Point	C305-LP081952	06-11-13	Installed	85372.304	36535.703	111.147	111.147	111.148	111.147	111.147
Levelling Point	C305-LP081953	06-11-13	Installed	85367.492	36534.344	111.190	111.190	111.190	111.191	111.191
Levelling Point	C305-LP081954	06-11-13	Installed	85362.684	36532.972	111.214	111.214	111.214	111.213	111.214
Levelling Point	C305-LP082001	06-11-13	Installed	85572.917	36628.899	111.070	111.071	111.071	111.070	111.071
Levelling Point	C305-LP082002	06-11-13	Installed	85568.091	36627.637	111.096	111.096	111.096	111.095	111.096
Levelling Point	C305-LP082003	06-11-13	Installed	85563.265	36626.373	111.099	111.099	111.099	111.100	111.099
Levelling Point	C305-LP082004	06-11-13	Installed	85558.442	36625.099	111.122	111.122	111.122	111.122	111.121
Levelling Point	C305-LP082005	06-11-13	Installed	85553.612	36623.825	111.132	111.132	111.132	111.132	111.133
Levelling Point	C305-LP082006	06-11-13	Installed	85548.791	36622.513	111.164	111.164	111.164	111.163	111.164
Levelling Point	C305-LP082007	06-11-13	Installed	85543.962	36621.262	111.184	111.184	111.185	111.184	111.184
Levelling Point	C305-LP082008	06-11-13	Installed	85539.117	36620.028	111.222	111.222	111.222	111.222	111.222
Levelling Point	C305-LP082009	06-11-13	Installed	85534.288	36618.770	111.264	111.264	111.264	111.265	111.264
Levelling Point	C305-LP082010	06-11-13	Installed	85529.351	36617.485	111.306	111.306	111.306	111.306	111.306
Levelling Point	C305-LP082011	06-11-13	Installed	85516.315	36613.473	111.212	111.212	111.211	111.212	111.212
Levelling Point	C305-LP082012	06-11-13	Installed	85511.508	36612.135	111.188	111.188	111.188	111.187	111.188
Levelling Point	C305-LP082013	06-11-13	Installed	85506.747	36610.662	111.162	111.162	111.161	111.162	111.162
Levelling Point	C305-LP082014	06-11-13	Installed	85501.879	36609.163	111.161	111.161	111.162	111.161	111.161
Levelling Point	C305-LP082015	06-11-13	Installed	85497.153	36607.728	111.128	111.128	111.128	111.128	111.128
Levelling Point	C305-LP082016	06-11-13	Installed	85492.417	36606.272	111.117	111.117	111.118	111.117	111.117

IRS Installation Record Sheets – Levelling Points										
Sensor Type	Sensor ID	Date Installation	Status	Sensor Location - GPS Reading			Commisioning Readings (m)			
				Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	Average	Elevation Z1 (mATD)	Elevation Z2 (mATD)	Elevation Z3 (mATD)
Levelling Point	C305-LP082017	06-11-13	Installed	85487.620	36604.789	111.111	111.111	111.110	111.111	111.111
Levelling Point	C305-LP082018	06-11-13	Installed	85482.847	36603.315	111.110	111.110	111.110	111.109	111.110
Levelling Point	C305-LP082019	06-11-13	Installed	85478.096	36601.861	111.120	111.121	111.121	111.120	111.121
Levelling Point	C305-LP082020	06-11-13	Installed	85473.304	36600.400	111.106	111.107	111.107	111.106	111.107
Levelling Point	C305-LP082021	06-11-13	Installed	85468.573	36598.973	111.080	111.080	111.081	111.080	111.081
Levelling Point	C305-LP082022	06-11-13	Installed	85463.729	36597.486	111.075	111.075	111.075	111.076	111.075
Levelling Point	C305-LP082023	06-11-13	Installed	85454.204	36594.521	111.078	111.078	111.078	111.079	111.078
Levelling Point	C305-LP082024	06-11-13	Installed	85449.466	36593.057	111.084	111.085	111.085	111.084	111.085
Levelling Point	C305-LP082025	06-11-13	Installed	85444.671	36591.610	111.098	111.098	111.099	111.098	111.099
Levelling Point	C305-LP082026	06-11-13	Installed	85439.898	36590.146	111.102	111.102	111.102	111.102	111.102
Levelling Point	C305-LP082027	06-11-13	Installed	85435.124	36588.692	111.102	111.102	111.102	111.101	111.102
Levelling Point	C305-LP082028	06-11-13	Installed	85430.400	36587.241	111.126	111.126	111.126	111.126	111.126
Levelling Point	C305-LP082029	06-11-13	Installed	85425.563	36585.746	111.169	111.169	111.169	111.169	111.169
Levelling Point	C305-LP082030	06-11-13	Installed	85420.794	36584.285	111.197	111.197	111.198	111.197	111.197
Levelling Point	C305-LP082031	06-11-13	Installed	85415.994	36582.842	111.233	111.233	111.234	111.233	111.233
Levelling Point	C305-LP082032	06-11-13	Installed	85411.225	36581.372	111.256	111.256	111.257	111.256	111.256
Levelling Point	C305-LP082033	06-11-13	Installed	85406.451	36579.917	111.282	111.282	111.282	111.283	111.282
Levelling Point	C305-LP082034	06-11-13	Installed	85401.678	36578.431	111.301	111.301	111.300	111.301	111.301
Levelling Point	C305-LP082035	06-11-13	Installed	85396.900	36576.979	111.322	111.322	111.322	111.321	111.322
Levelling Point	C305-LP082036	06-11-13	Installed	85387.330	36574.037	111.336	111.336	111.336	111.336	111.336
Levelling Point	C305-LP082037	06-11-13	Installed	85382.563	36572.578	111.375	111.375	111.375	111.376	111.375
Levelling Point	C305-LP082038	06-11-13	Installed	85377.780	36571.112	111.421	111.421	111.421	111.421	111.421
Levelling Point	C305-LP082039	06-11-13	Installed	85373.026	36569.656	111.450	111.450	111.449	111.450	111.450
Levelling Point	C305-LP082040	06-11-13	Installed	85368.260	36568.184	111.479	111.479	111.479	111.480	111.479
Levelling Point	C305-LP082041	06-11-13	Installed	85363.453	36566.703	111.498	111.498	111.497	111.498	111.498
Levelling Point	C305-LP082042	06-11-13	Installed	85358.692	36565.246	111.529	111.529	111.529	111.530	111.529
Levelling Point	C305-LP082043	06-11-13	Installed	85353.927	36563.809	111.538	111.538	111.538	111.538	111.538
Levelling Point	C305-LP082044	06-11-13	Installed	85349.128	36562.316	111.533	111.533	111.533	111.533	111.533
Levelling Point	C305-LP082045	06-11-13	Installed	85344.378	36560.846	111.534	111.534	111.534	111.535	111.534
							08-11-13			
Levelling Point	C305-LP082101	06-11-13	Installed	85551.542	36509.406	110.633	110.633	110.633	110.634	110.634
Levelling Point	C305-LP082102	06-11-13	Installed	85551.715	36514.379	110.641	110.641	110.641	110.641	110.641
Levelling Point	C305-LP082103	06-11-13	Installed	85551.986	36519.402	110.657	110.657	110.657	110.658	110.658
Levelling Point	C305-LP082104	06-11-13	Installed	85551.714	36524.422	110.638	110.638	110.638	110.637	110.638
Levelling Point	C305-LP082105	06-11-13	Installed	85551.287	36529.402	110.622	110.622	110.622	110.622	110.622
Levelling Point	C305-LP082106	06-11-13	Installed	85551.090	36531.864	110.608	110.608	110.608	110.608	110.609
Levelling Point	C305-LP082107	06-11-13	Installed	85550.864	36534.383	110.618	110.618	110.618	110.617	110.618
Levelling Point	C305-LP082108	06-11-13	Installed	85550.677	36536.842	110.621	110.621	110.621	110.621	110.621

IRS Installation Record Sheets – Levelling Points										
Sensor Type	Sensor ID	Date Installation	Status	Sensor Location - GPS Reading			Commisioning Readings (m)			
				Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	Average	Elevation Z1 (mATD)	Elevation Z2 (mATD)	Elevation Z3 (mATD)
Levelling Point	C305-LP082109	06-11-13	Installed	85550.432	36539.353	110.643	110.643	110.644	110.642	110.643
Levelling Point	C305-LP082110	06-11-13	Installed	85550.196	36541.812	110.678	110.678	110.677	110.678	110.678
Levelling Point	C305-LP082111	06-11-13	Installed	85549.859	36544.219	110.667	110.667	110.666	110.667	110.666
Levelling Point	C305-LP082112	06-11-13	Installed	85549.011	36546.676	110.702	110.702	110.702	110.702	110.701
Levelling Point	C305-LP082113	06-11-13	Installed	85548.097	36548.985	110.721	110.721	110.720	110.721	110.721
Levelling Point	C305-LP082114	06-11-13	Installed	85547.233	36551.341	110.721	110.721	110.721	110.721	110.721
Levelling Point	C305-LP082115	06-11-13	Installed	85546.355	36553.692	110.730	110.730	110.731	110.729	110.730
Levelling Point	C305-LP082116	06-11-13	Installed	85545.238	36555.853	110.738	110.739	110.739	110.738	110.738
Levelling Point	C305-LP082117	06-11-13	Installed	85544.961	36561.448	110.700	110.700	110.700	110.701	110.700
Levelling Point	C305-LP082118	06-11-13	Installed	85544.881	36566.447	110.746	110.746	110.746	110.747	110.746
Levelling Point	C305-LP082119	06-11-13	Installed	85543.530	36571.261	110.770	110.770	110.770	110.770	110.770
Levelling Point	C305-LP082120	06-11-13	Installed	85542.076	36576.045	110.686	110.686	110.686	110.685	110.685
Levelling Point	C305-LP082201	06-11-13	Installed	85476.824	36520.908	110.925	110.925	110.925	110.925	110.925
Levelling Point	C305-LP082202	06-11-13	Installed	85475.905	36525.817	110.906	110.906	110.907	110.906	110.906
Levelling Point	C305-LP082203	06-11-13	Installed	85474.978	36530.768	110.862	110.862	110.862	110.861	110.862
Levelling Point	C305-LP082204	06-11-13	Installed	85474.066	36535.640	110.836	110.836	110.836	110.836	110.836
Levelling Point	C305-LP082205	06-11-13	Installed	85473.132	36540.629	110.848	110.848	110.848	110.848	110.848
Levelling Point	C305-LP082206	06-11-13	Installed	85471.842	36545.397	110.882	110.882	110.883	110.882	110.882
Levelling Point	C305-LP082207	06-11-13	Installed	85471.133	36547.852	110.899	110.899	110.899	110.900	110.900
Levelling Point	C305-LP082208	06-11-13	Installed	85470.463	36550.248	110.907	110.907	110.907	110.906	110.907
Levelling Point	C305-LP082209	06-11-13	Installed	85469.817	36552.670	110.896	110.896	110.896	110.896	110.895
Levelling Point	C305-LP082210	06-11-13	Installed	85469.119	36555.154	110.933	110.933	110.933	110.933	110.934
Levelling Point	C305-LP082211	06-11-13	Installed	85466.593	36555.385	110.946	110.946	110.946	110.947	110.946
Levelling Point	C305-LP082212	06-11-13	Installed	85464.126	36555.830	110.936	110.936	110.937	110.936	110.936
Levelling Point	C305-LP082213	06-11-13	Installed	85461.662	36556.160	110.926	110.926	110.925	110.926	110.926
Levelling Point	C305-LP082214	06-11-13	Installed	85459.237	36556.627	110.915	110.915	110.915	110.915	110.915
Levelling Point	C305-LP082215	06-11-13	Installed	85456.727	36556.967	110.923	110.924	110.923	110.924	110.923
Levelling Point	C305-LP082216	06-11-13	Installed	85454.261	36557.346	110.917	110.917	110.917	110.918	110.917
Levelling Point	C305-LP082217	06-11-13	Installed	85451.824	36557.746	110.916	110.916	110.916	110.916	110.916
							13-11-13			
Levelling Point	C305-LP082301	13-12-13	Installed	85366.622	36579.491	111.696	111.696	111.695	111.696	111.696
Levelling Point	C305-LP082302	13-12-13	Installed	85372.822	36582.759	111.691	111.692	111.692	111.691	111.692
Levelling Point	C305-LP082303	13-12-13	Installed	85376.426	36586.225	111.623	111.623	111.623	111.622	111.622
Levelling Point	C305-LP082304	13-12-13	Installed	85376.502	36591.224	111.354	111.354	111.355	111.354	111.355
Levelling Point	C305-LP082305	13-12-13	Installed	85373.254	36595.025	111.049	111.050	111.049	111.050	111.050
Levelling Point	C305-LP082306	13-12-13	Installed	85368.556	36596.736	111.068	111.069	111.069	111.068	111.069
Levelling Point	C305-LP082307	13-12-13	Installed	85368.064	36601.712	110.942	110.943	110.943	110.942	110.943
Levelling Point	C305-LP082308	13-12-13	Installed	85368.089	36604.212	111.022	111.022	111.022	111.021	111.023

IRS Installation Record Sheets – Levelling Points										
Sensor Type	Sensor ID	Date Installation	Status	Sensor Location - GPS Reading			Commisioning Readings (m)			
				Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	Average	Elevation Z1 (mATD)	Elevation Z2 (mATD)	Elevation Z3 (mATD)
Levelling Point	C305-LP082309	13-12-13	Installed	85368.000	36606.675	111.059	111.059	111.059	111.060	111.059
Levelling Point	C305-LP082310	13-12-13	Installed	85367.960	36609.221	111.056	111.056	111.056	111.057	111.056
Levelling Point	C305-LP082311	13-12-13	Installed	85367.814	36611.765	111.077	111.078	111.078	111.077	111.078
Levelling Point	C305-LP082312	13-12-13	Installed	85367.779	36614.268	111.094	111.094	111.094	111.094	111.095
Levelling Point	C305-LP082313	13-12-13	Installed	85367.724	36616.710	111.108	111.108	111.107	111.108	111.108
Levelling Point	C305-LP082314	13-12-13	Installed	85367.647	36619.401	111.088	111.088	111.088	111.089	111.089
Levelling Point	C305-LP082315	13-12-13	Installed	85367.597	36621.626	111.076	111.076	111.077	111.076	111.076
Levelling Point	C305-LP082316	13-12-13	Installed	85367.579	36624.222	111.068	111.068	111.067	111.068	111.068
Levelling Point	C305-LP082317	13-12-13	Installed	85367.610	36626.634	111.055	111.055	111.055	111.054	111.055
Levelling Point	C305-LP082318	13-12-13	Installed	85367.556	36629.098	111.072	111.072	111.072	111.072	111.072
Levelling Point	C305-LP082319	13-12-13	Installed	85367.506	36634.130	111.070	111.069	111.069	111.069	111.069
Levelling Point	C305-LP082320	13-12-13	Installed	85367.349	36639.115	111.045	111.045	111.045	111.046	111.045
Levelling Point	C305-LP082321	13-12-13	Installed	85367.208	36644.068	111.047	111.047	111.047	111.047	111.047
Levelling Point	C305-LP082322	13-12-13	Installed	85366.965	36647.315	111.093	111.093	111.092	111.093	111.093

All elevations or levels presented in this document are metres above tunnel datum (mATD).

Sensor Type	Date Installation	Sensor ID	Status	Location Sensor – GPS readings (m)			Depth (m bgl)
				Eastings X	Northings Y	Elevation Z (mATD)	
Inclinometer	16/08/2013	C305-IM080010	Installed	86000.889	36367.094	109.619	35.0m
Piezometer	01/08/2013	C305-PV08010	Installed	85997.999	36368.681	109.696	26.0m
Rod Extensometer	23/08/2013	C305-XR08010	Installed	85999.213	36360.507	109.125	26.0m
Inclinometer	21/08/2013	C305-IM080020	Installed	85992.538	36363.729	109.805	35.0m
Piezometer	29/08/2013	C305-PV08020	Installed	85995.988	36361.945	110.545	26.0m
Rod Extensometer	19/08/2013	C305-XR08020	Installed	85997.704	36354.767	109.695	20.0m
Piezometer	31/07/2013	C305-PV08030	Installed	85991.073	36358.034	109.757	20.0m
Rod Extensometer	27/08/2013	C305-XR08030	Installed	85976.713	36332.454	109.722	23.5m
Inclinometer	14/08/2013	C305-IM080030	Installed	85971.915	36328.837	109.910	38.5m
Piezometer	30/07/2013	C305-PV08040	Installed	85970.679	36336.533	109.797	23.5m
Rod Extensometer	16/08/2013	C305-XR08040	Installed	85976.963	36325.638	109.660	29.5m
Inclinometer	22/08/2013	C305-IM080040	Installed	85978.013	36317.950	109.620	38.5m
Piezometer	31/07/2013	C305-PV08050	Installed	85967.892	36331.580	109.548	29.5m
Piezometer	20/08/2013	C305-PV08060	Installed	85971.551	36322.286	109.630	29.5m

Sensor Type	Sensor ID	Date of Installation	Status	SENSOR Location - GPS reading (m)			Depth (m bgl)
				Eastings X	Northings Y	Elevation Z (mATD)	
Inclinometer	C305-IM081010	09/10/2013	Installed	85370.198	36575.72	111.617	35.0m
Inclinometer	C305-IM081020	10/10/2013	Installed	85546.816	36584.197	113.684	34.0m

Sensor Type	Monitoring ID	Date Installation	Status	Location MONR			Depth (m bgl)
				Eastings X	Northings Y	Elevation Z (mATD)	
Shallow Datum	C305-SD080010	01/10/2013	Installed	85768.455	36421.423	109.921	3.41
Shallow Datum	C305-SD080020	01/10/2013	Installed	85740.515	36480.072	109.799	3.59
Shallow Datum	C305-SD080030	14/12/2013	Installed	85665.873	36488.262	110.538	3.66
Shallow Datum	C305-SD080040	14/09/2013	Installed	85644.037	36579.505	110.303	3.80

COMMISSIONING READINGS SHALLOW DATUMS

Sensor Type	Monitoring ID	Date Installation	Commissioning Readings (mATD)		
			20/11/2013	20/11/2013	20/11/2013
Shallow Datum	C305-SD080010	01/10/2013	109.8476	109.8479	109.8481
			10/12/2013	10/12/2013	10/12/2013
Shallow Datum	C305-SD080020	01/10/2013	109.6973	109.6980	109.6983
			14/12/2013	14/12/2013	14/12/2013
Shallow Datum	C305-SD080030	14/12/2013	110.4186	110.4193	110.4195
			05/12/2013	05/12/2013	05/12/2013
Shallow Datum	C305-SD080040	14/09/2013	110.3033	110.3037	110.3025

COMMISSIONING READINGS VIBRATING WIRE PIEZOMETERS

Sensor Type	Monitoring ID	Commissioning Readings Vibrating Wire piezometers (m, mATD)			
		01/10/2013	01/10/2013	01/10/2013	AVERAGE
Vibrating Wire Piezometer	C305-PV08010	93.870	93.842	93.850	93.854
Vibrating Wire Piezometer	C305-PV08020	92.871	92.859	92.871	92.867
Vibrating Wire Piezometer	C305-PV08030	97.709	97.693	97.701	97.701
Vibrating Wire Piezometer	C305-PV08040	98.855	98.839	98.835	98.843
Vibrating Wire Piezometer	C305-PV08050	96.230	96.258	96.238	96.242
Vibrating Wire Piezometer	C305-PV08060	98.820	98.840	98.812	98.824

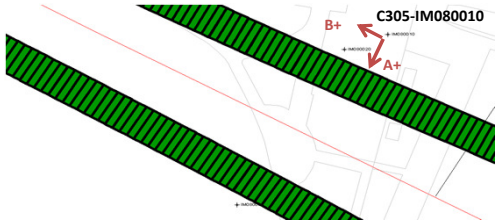
COMMISSIONING READINGS VIBRATING ROD EXTENSOMETERS

Sensor Type	Sensor ID	Depth (m)	Commissioning Readings Head Level (mATD) Commissioning Readings Rod Extensometers (mm)			
			15/11/2013	15/11/2013	15/11/2013	AVERAGE
Rod Extensometer	C305-XR08010	Head Level	109.018	109.017	109.018	109.018
		26.0	38.224	38.192	38.184	38.200
		21.5	39.884	39.916	39.900	39.900
		17.0	41.404	41.396	41.400	41.400
		12.5	42.626	42.602	42.602	42.610
		8.5	39.600	39.628	39.632	39.620
		4.0	38.142	38.170	38.138	38.150

Sensor Type	Sensor ID	Depth (m)	Commissioning Readings Head Level (mATD) Commissioning Readings Rod Extensometers (mm)			
			13/11/2013	13/11/2013	13/11/2013	AVERAGE
Rod Extensometer	C305-XR08020	Head Level	109.085	109.085	109.085	109.085
		20.0	41.428	41.404	41.428	41.420
		16.5	36.552	36.532	36.536	36.540
		13.0	36.516	36.496	36.488	36.500
		9.5	36.614	36.574	36.582	36.590
		6.5	41.418	41.386	41.426	41.410
		3.0	31.076	31.120	31.104	31.100
			14/11/2013	14/11/2013	14/11/2013	AVERAGE
Rod Extensometer	C305-XR08030	Head Level	108.982	108.980	108.981	108.981
		23.5	43.180	43.220	43.200	43.200
		19.5	43.824	43.784	43.792	43.800
		15.5	38.784	38.816	38.800	38.800
		11.5	41.958	41.938	41.954	41.950
		7.5	41.850	41.822	41.818	41.830
		3.5	40.630	40.590	40.610	40.610
			12/11/2013	12/11/2013	12/11/2013	AVERAGE
Rod Extensometer	C305-XR08040	Head Level	109.090	109.090	109.090	109.090
		29.5	40.984	40.972	40.984	40.980
		24.5	46.364	46.320	46.336	46.340
		19.5	40.390	40.350	40.370	40.370
		14.5	38.962	38.930	38.958	38.950
		9.5	41.504	41.492	41.504	41.500
		4.5	38.462	38.490	38.458	38.470
Head level is the level survey point (levelling point) fixed to the top of the reference head.						
Note: The difference between the Elevevation Z reading and Commissioning reding results from the use of a GPS staff and a manual level respectively.						
All elevations or levels presented in this document are metres above tunnel datum (mATD)						

COMMISSIONING READINGS VIBRATING INCLINOMETERS

C305-IM080010

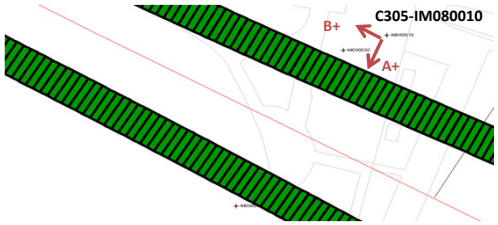


Serial number probe: 1035333

20-9-13 10:12

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	-179	-20	-1472	1569	-1.988	-38.013	-1519.438	-1019.425
1	-99	-94	-1239	1340	-0.063	-32.238	-1517.450	-981.413
1.5	-184	-12	-1093	1189	-2.150	-28.525	-1517.388	-949.175
2	-258	70	-973	1086	-4.100	-25.738	-1515.238	-920.650
2.5	-390	222	-931	1035	-7.650	-24.575	-1511.138	-894.913
3	-521	339	-933	1033	-10.750	-24.575	-1503.488	-870.338
3.5	-571	374	-867	962	-11.813	-22.863	-1492.738	-845.763
4	-455	282	-871	964	-9.213	-22.938	-1480.925	-822.900
4.5	-534	346	-824	904	-11.000	-21.600	-1471.713	-799.963
5	-525	331	-813	888	-10.700	-21.263	-1460.713	-778.363
5.5	-470	279	-793	881	-9.363	-20.925	-1450.013	-757.100
6	-478	285	-747	828	-9.538	-19.688	-1440.650	-736.175
6.5	-493	293	-657	737	-9.825	-17.425	-1431.113	-716.488
7	-528	338	-595	694	-10.825	-16.113	-1421.288	-699.063
7.5	-592	409	-783	882	-12.513	-20.813	-1410.463	-682.950
8	-607	423	-759	825	-12.875	-19.800	-1397.950	-662.138
8.5	-610	409	-791	862	-12.738	-20.663	-1385.075	-642.338
9	-620	415	-803	898	-12.938	-21.263	-1372.338	-621.675
9.5	-661	480	-841	930	-14.263	-22.138	-1359.400	-600.413
10	-779	588	-811	888	-17.088	-21.238	-1345.138	-578.275
10.5	-1013	828	-715	795	-23.013	-18.875	-1328.050	-557.038
11	-1030	839	-618	697	-23.363	-16.438	-1305.038	-538.163
11.5	-1005	813	-476	569	-22.725	-13.063	-1281.675	-521.725
12	-981	802	-331	433	-22.288	-9.550	-1258.950	-508.663
12.5	-1032	836	-259	345	-23.350	-7.550	-1236.663	-499.113
13	-1055	887	-140	245	-24.275	-4.813	-1213.313	-491.563
13.5	-1144	958	-129	199	-26.275	-4.100	-1189.038	-486.750
14	-1245	1047	-83	148	-28.650	-2.888	-1162.763	-482.650
14.5	-1342	1139	-68	133	-31.013	-2.513	-1134.113	-479.763
15	-1458	1264	-57	142	-34.025	-2.488	-1103.100	-477.250
15.5	-1542	1354	-67	134	-36.200	-2.513	-1069.075	-474.763
16	-1661	1441	7	128	-38.775	-1.513	-1032.875	-472.250
16.5	-1844	1679	207	-128	-44.038	4.188	-994.100	-470.738
17	-1951	1759	102	6	-46.375	1.200	-950.063	-474.925
17.5	-1858	1667	17	83	-44.063	-0.825	-903.688	-476.125
18	-1651	1466	2	85	-38.963	-1.038	-859.625	-475.300
18.5	-1450	1257	14	88	-33.838	-0.925	-820.663	-474.263
19	-1452	1250	84	70	-33.775	0.175	-786.825	-473.338
19.5	-1574	1382	178	-107	-36.950	3.563	-753.050	-473.513
20	-1460	1293	-192	287	-34.413	-5.988	-716.100	-477.075
20.5	-1363	1154	-523	612	-31.463	-14.188	-681.688	-471.088
21	-1089	893	-833	924	-24.775	-21.963	-650.225	-456.900
21.5	-795	616	-1134	1226	-17.638	-29.500	-625.450	-434.938
22	-606	388	-1323	1397	-12.425	-34.000	-607.813	-405.438
22.5	-703	524	-1031	1103	-15.338	-26.675	-595.388	-371.438
23	-868	705	-1067	1123	-19.663	-27.375	-580.050	-344.763
23.5	-1005	809	-1174	1239	-22.675	-30.163	-560.388	-317.388
24	-1076	872	-1275	1343	-24.350	-32.725	-537.713	-287.225
24.5	-1155	970	-1371	1430	-26.563	-35.013	-513.363	-254.500
25	-1270	1091	-1489	1538	-29.513	-37.838	-486.800	-219.488
25.5	-1371	1173	-1571	1675	-31.800	-40.575	-457.288	-181.650
26	-1295	1098	-1263	1333	-29.913	-32.450	-425.488	-141.075
26.5	-1250	1034	-971	1037	-28.550	-25.100	-395.575	-108.625
27	-1084	915	-697	784	-24.988	-18.513	-367.025	-83.525
27.5	-1020	822	-486	574	-23.025	-13.250	-342.038	-65.013
28	-854	661	-175	269	-18.938	-5.550	-319.013	-51.763
28.5	-649	471	-429	508	-14.000	-11.713	-300.075	-46.213
29	-759	542	-450	524	-16.263	-12.175	-286.075	-34.500
29.5	-1021	829	6	119	-23.125	-1.413	-269.813	-22.325
30	-1182	998	66	53	-27.250	0.163	-246.688	-20.913
30.5	-1043	856	72	49	-23.738	0.288	-219.438	-21.075
31	-857	671	88	63	-19.100	0.313	-195.700	-21.363
31.5	-1090	900	101	17	-24.875	1.050	-176.600	-21.675
32	-1498	1307	29	83	-35.063	-0.675	-151.725	-22.725
32.5	-1465	1271	-135	237	-34.200	-4.650	-116.663	-22.050
33	-1474	1288	-305	375	-34.525	-8.500	-82.463	-17.400
33.5	-2021	1814	-314	398	-47.938	-8.900	-47.938	-8.900
Reference Point							0.000	0.000

C305-IM080010

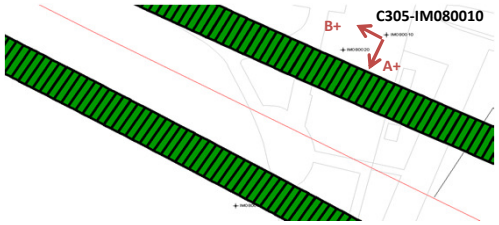


Serial number probe: DI1244

24-9-13 14:18

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	-139	17	-1452	1589	-1.950	-38.013	-1516.388	-1017.875
1	-60	-64	-1213	1367	0.050	-32.250	-1514.438	-979.863
1.5	-141	26	-1067	1216	-2.088	-28.538	-1514.488	-947.613
2	-219	109	-952	1105	-4.100	-25.713	-1512.400	-919.075
2.5	-353	255	-903	1056	-7.600	-24.488	-1508.300	-893.363
3	-477	369	-903	1056	-10.575	-24.488	-1500.700	-868.875
3.5	-529	412	-841	985	-11.763	-22.825	-1490.125	-844.388
4	-415	319	-849	992	-9.175	-23.013	-1478.363	-821.563
4.5	-495	384	-803	925	-10.988	-21.600	-1469.188	-798.550
5	-483	365	-787	916	-10.600	-21.288	-1458.200	-776.950
5.5	-427	315	-772	906	-9.275	-20.975	-1447.600	-755.663
6	-435	319	-721	856	-9.425	-19.713	-1438.325	-734.688
6.5	-457	330	-627	755	-9.838	-17.275	-1428.900	-714.975
7	-489	377	-573	712	-10.825	-16.063	-1419.063	-697.700
7.5	-548	442	-761	904	-12.375	-20.813	-1408.238	-681.638
8	-568	463	-730	849	-12.888	-19.738	-1395.863	-660.825
8.5	-568	449	-761	885	-12.713	-20.575	-1382.975	-641.088
9	-576	455	-783	926	-12.888	-21.363	-1370.263	-620.513
9.5	-617	514	-817	951	-14.138	-22.100	-1357.375	-599.150
10	-744	621	-790	910	-17.063	-21.250	-1343.238	-577.050
10.5	-971	859	-688	823	-22.875	-18.888	-1326.175	-555.800
11	-995	870	-597	725	-23.313	-16.525	-1303.300	-536.913
11.5	-966	853	-454	597	-22.738	-13.138	-1279.988	-520.388
12	-940	836	-309	458	-22.200	-9.588	-1257.250	-507.250
12.5	-998	876	-237	363	-23.425	-7.500	-1235.050	-497.663
13	-1021	918	-113	271	-24.238	-4.800	-1211.625	-490.163
13.5	-1109	992	-102	225	-26.263	-4.088	-1187.388	-485.363
14	-1206	1078	-56	168	-28.550	-2.800	-1161.125	-481.275
14.5	-1304	1179	-47	161	-31.038	-2.600	-1132.575	-478.475
15	-1414	1296	-36	161	-33.875	-2.463	-1101.538	-475.875
15.5	-1501	1384	-39	153	-36.063	-2.400	-1067.663	-473.413
16	-1620	1479	35	149	-38.738	-1.425	-1031.600	-471.013
16.5	-1808	1715	236	-106	-44.038	4.275	-992.863	-469.588
17	-1910	1791	122	29	-46.263	1.163	-948.825	-473.863
17.5	-1824	1706	46	103	-44.125	-0.713	-902.563	-475.025
18	-1614	1504	26	110	-38.975	-1.050	-858.438	-474.313
18.5	-1412	1293	44	110	-33.813	-0.825	-819.463	-473.263
19	-1416	1286	104	88	-33.775	0.200	-785.650	-472.438
19.5	-1539	1414	205	-83	-36.913	3.600	-751.875	-472.638
20	-1425	1329	-170	306	-34.425	-5.950	-714.963	-476.238
20.5	-1320	1191	-502	636	-31.388	-14.225	-680.538	-470.288
21	-1055	933	-810	945	-24.850	-21.938	-649.150	-456.063
21.5	-756	656	-1110	1247	-17.650	-29.463	-624.300	-434.125
22	-564	423	-1302	1422	-12.338	-34.050	-606.650	-404.663
22.5	-668	561	-1004	1129	-15.363	-26.663	-594.313	-370.613
23	-834	739	-1037	1145	-19.663	-27.275	-578.950	-343.950
23.5	-965	849	-1149	1265	-22.675	-30.175	-559.288	-316.675
24	-1032	907	-1247	1364	-24.238	-32.638	-536.613	-286.500
24.5	-1119	1009	-1347	1448	-26.600	-34.938	-512.375	-253.863
25	-1229	1130	-1461	1566	-29.488	-37.838	-485.775	-218.925
25.5	-1330	1205	-1548	1694	-31.688	-40.525	-456.288	-181.088
26	-1251	1136	-1237	1358	-29.838	-32.438	-424.600	-140.563
26.5	-1207	1071	-944	1064	-28.475	-25.100	-394.763	-108.125
27	-1049	947	-671	811	-24.950	-18.525	-366.288	-83.025
27.5	-983	858	-458	598	-23.013	-13.200	-341.338	-64.500
28	-813	695	-154	287	-18.850	-5.513	-318.325	-51.300
28.5	-607	508	-401	533	-13.938	-11.675	-299.475	-45.788
29	-715	582	-424	544	-16.213	-12.100	-285.538	-34.113
29.5	-985	866	28	146	-23.138	-1.475	-269.325	-22.013
30	-1140	1036	96	79	-27.200	0.213	-246.188	-20.538
30.5	-1004	890	96	72	-23.675	0.300	-218.988	-20.750
31	-818	706	116	87	-19.050	0.363	-195.313	-21.050
31.5	-1055	934	121	42	-24.863	0.988	-176.263	-21.413
32	-1460	1340	52	101	-35.000	-0.613	-151.400	-22.400
32.5	-1422	1310	-106	256	-34.150	-4.525	-116.400	-21.788
33	-1430	1318	-276	397	-34.350	-8.413	-82.250	-17.263
33.5	-1985	1847	-289	419	-47.900	-8.850	-47.900	-8.850
Reference Point							0.000	0.000

C305-IM080010



Serial number probe: 1035333

20-9-13 11:19

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	-178	-18	-1463	1590	-2.000	-38.163	-1521.500	-1024.313
1	-101	-101	-1250	1346	0.000	-32.450	-1519.500	-986.150
1.5	-185	-14	-1091	1200	-2.138	-28.638	-1519.500	-953.700
2	-266	73	-978	1086	-4.238	-25.800	-1517.363	-925.063
2.5	-402	214	-925	1048	-7.700	-24.663	-1513.125	-899.263
3	-517	326	-926	1033	-10.538	-24.488	-1505.425	-874.600
3.5	-563	382	-863	959	-11.813	-22.775	-1494.888	-850.113
4	-463	276	-878	970	-9.238	-23.100	-1483.075	-827.338
4.5	-540	339	-838	898	-10.988	-21.700	-1473.838	-804.238
5	-522	321	-809	910	-10.538	-21.488	-1462.850	-782.538
5.5	-458	280	-802	886	-9.225	-21.100	-1452.313	-761.050
6	-469	280	-746	846	-9.363	-19.900	-1443.088	-739.950
6.5	-495	301	-644	742	-9.950	-17.325	-1433.725	-720.050
7	-527	334	-599	698	-10.763	-16.213	-1423.775	-702.725
7.5	-589	409	-797	891	-12.475	-21.100	-1413.013	-686.513
8	-607	424	-756	839	-12.888	-19.938	-1400.538	-665.413
8.5	-606	406	-782	874	-12.650	-20.700	-1387.650	-645.475
9	-612	423	-799	904	-12.938	-21.288	-1375.000	-624.775
9.5	-665	480	-848	944	-14.313	-22.400	-1362.063	-603.488
10	-784	589	-817	898	-17.163	-21.438	-1347.750	-581.088
10.5	-1009	825	-716	816	-22.925	-19.150	-1330.588	-559.650
11	-1033	837	-617	704	-23.375	-16.513	-1307.663	-540.500
11.5	-996	823	-480	577	-22.738	-13.213	-1284.288	-523.988
12	-988	806	-333	435	-22.425	-9.600	-1261.550	-510.775
12.5	-1037	842	-258	342	-23.488	-7.500	-1239.125	-501.175
13	-1066	883	-140	262	-24.363	-5.025	-1215.638	-493.675
13.5	-1145	958	-129	209	-26.288	-4.225	-1191.275	-488.650
14	-1250	1053	-67	153	-28.788	-2.750	-1164.988	-484.425
14.5	-1344	1153	-73	146	-31.213	-2.738	-1136.200	-481.675
15	-1449	1272	-61	139	-34.013	-2.500	-1104.988	-478.938
15.5	-1541	1359	-65	130	-36.250	-2.438	-1070.975	-476.438
16	-1666	1455	8	125	-39.013	-1.463	-1034.725	-474.000
16.5	-1853	1690	217	-132	-44.288	4.363	-995.713	-472.538
17	-1951	1759	92	14	-46.375	0.975	-951.425	-476.900
17.5	-1865	1674	16	77	-44.238	-0.763	-905.050	-477.875
18	-1651	1478	7	85	-39.113	-0.975	-860.813	-477.113
18.5	-1456	1260	13	87	-33.950	-0.925	-821.700	-476.138
19	-1455	1264	88	58	-33.988	0.375	-787.750	-475.213
19.5	-1575	1382	182	-97	-36.963	3.488	-753.763	-475.588
20	-1469	1291	-198	293	-34.500	-6.138	-716.800	-479.075
20.5	-1353	1164	-532	611	-31.463	-14.288	-682.300	-472.938
21	-1089	895	-834	940	-24.800	-22.175	-650.838	-458.650
21.5	-801	619	-1132	1241	-17.750	-29.663	-626.038	-436.475
22	-602	382	-1319	1406	-12.300	-34.063	-608.288	-406.813
22.5	-703	521	-1031	1112	-15.300	-26.788	-595.988	-372.750
23	-879	698	-1062	1132	-19.713	-27.425	-580.688	-345.963
23.5	-1015	819	-1181	1250	-22.925	-30.388	-560.975	-318.538
24	-1066	877	-1271	1346	-24.288	-32.713	-538.050	-288.150
24.5	-1164	971	-1368	1445	-26.688	-35.163	-513.763	-255.438
25	-1275	1104	-1482	1561	-29.738	-38.038	-487.075	-220.275
25.5	-1368	1164	-1578	1693	-31.650	-40.888	-457.338	-182.238
26	-1281	1109	-1258	1356	-29.875	-32.675	-425.688	-141.350
26.5	-1248	1028	-976	1057	-28.450	-25.413	-395.813	-108.675
27	-1085	905	-682	790	-24.875	-18.400	-367.363	-83.263
27.5	-1015	828	-475	580	-23.038	-13.188	-342.488	-64.863
28	-855	661	-177	263	-18.950	-5.500	-319.450	-51.675
28.5	-656	472	-422	529	-14.100	-11.888	-300.500	-46.175
29	-754	549	-456	526	-16.288	-12.275	-286.400	-34.288
29.5	-1028	839	1	114	-23.338	-1.413	-270.113	-22.013
30	-1186	1000	66	42	-27.325	0.300	-246.775	-20.600
30.5	-1042	850	67	45	-23.650	0.275	-219.450	-20.900
31	-860	666	77	51	-19.075	0.325	-195.800	-21.175
31.5	-1095	899	103	26	-24.925	0.963	-176.725	-21.500
32	-1501	1306	27	78	-35.088	-0.638	-151.800	-22.463
32.5	-1459	1274	-131	227	-34.163	-4.475	-116.713	-21.825
33	-1464	1290	-304	368	-34.425	-8.400	-82.550	-17.350
33.5	-2021	1829	-327	389	-48.125	-8.950	-48.125	-8.950
Reference Point							0.000	0.000

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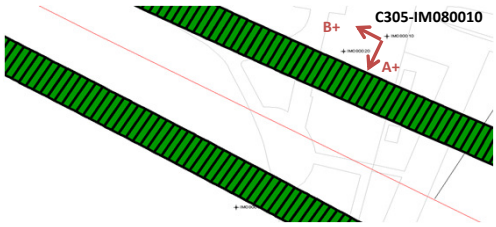
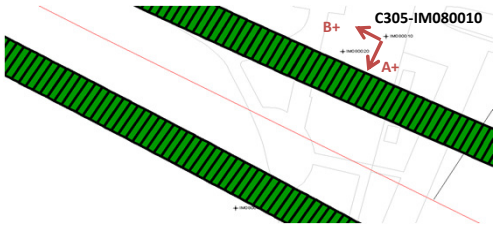


Serial number probe: DI1244

24-9-13 15:28

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	-143	15	-1439	1611	-1.975	-38.125	-1518.300	-1022.050
1	-66	-70	-1222	1370	0.050	-32.400	-1516.325	-983.925
1.5	-145	22	-1066	1227	-2.088	-28.663	-1516.375	-951.525
2	-226	110	-951	1109	-4.200	-25.750	-1514.288	-922.863
2.5	-364	251	-903	1067	-7.688	-24.625	-1510.088	-897.113
3	-475	362	-902	1057	-10.463	-24.488	-1502.400	-872.488
3.5	-527	414	-836	984	-11.763	-22.750	-1491.938	-848.000
4	-420	313	-854	996	-9.163	-23.125	-1480.175	-825.250
4.5	-498	376	-809	925	-10.925	-21.675	-1471.013	-802.125
5	-480	360	-786	930	-10.500	-21.450	-1460.088	-780.450
5.5	-423	313	-777	913	-9.200	-21.125	-1449.588	-759.000
6	-430	319	-719	865	-9.363	-19.800	-1440.388	-737.875
6.5	-453	335	-620	763	-9.850	-17.288	-1431.025	-718.075
7	-491	373	-578	717	-10.800	-16.188	-1421.175	-700.788
7.5	-551	444	-772	911	-12.438	-21.038	-1410.375	-684.600
8	-572	462	-728	858	-12.925	-19.825	-1397.938	-663.563
8.5	-565	445	-754	894	-12.625	-20.600	-1385.013	-643.738
9	-573	456	-770	929	-12.863	-21.238	-1372.388	-623.138
9.5	-625	512	-819	963	-14.213	-22.275	-1359.525	-601.900
10	-744	627	-790	922	-17.138	-21.400	-1345.313	-579.625
10.5	-971	860	-688	836	-22.888	-19.050	-1328.175	-558.225
11	-991	871	-594	731	-23.275	-16.563	-1305.288	-539.175
11.5	-959	860	-452	596	-22.738	-13.100	-1282.013	-522.613
12	-945	843	-308	461	-22.350	-9.613	-1259.275	-509.513
12.5	-994	875	-235	364	-23.363	-7.488	-1236.925	-499.900
13	-1026	920	-111	282	-24.325	-4.913	-1213.563	-492.413
13.5	-1106	991	-102	233	-26.213	-4.188	-1189.238	-487.500
14	-1208	1086	-42	177	-28.675	-2.738	-1163.025	-483.313
14.5	-1302	1189	-48	173	-31.138	-2.763	-1134.350	-480.575
15	-1409	1307	-37	162	-33.950	-2.488	-1103.213	-477.813
15.5	-1503	1393	-37	155	-36.200	-2.400	-1069.263	-475.325
16	-1625	1491	36	146	-38.950	-1.375	-1033.063	-472.925
16.5	-1811	1723	242	-109	-44.175	4.388	-994.113	-471.550
17	-1909	1797	114	38	-46.325	0.950	-949.938	-475.938
17.5	-1829	1706	43	104	-44.188	-0.763	-903.613	-476.888
18	-1615	1516	31	107	-39.138	-0.950	-859.425	-476.125
18.5	-1415	1296	42	114	-33.888	-0.900	-820.288	-475.175
19	-1414	1297	110	85	-33.888	0.313	-786.400	-474.275
19.5	-1536	1417	208	-76	-36.913	3.550	-752.513	-474.588
20	-1427	1327	-175	314	-34.425	-6.113	-715.600	-478.138
20.5	-1317	1197	-504	638	-31.425	-14.275	-681.175	-472.025
21	-1054	931	-813	960	-24.813	-22.163	-649.750	-457.750
21.5	-762	655	-1110	1265	-17.713	-29.688	-624.938	-435.588
22	-563	419	-1293	1427	-12.275	-34.000	-607.225	-405.900
22.5	-664	556	-1004	1139	-15.250	-26.788	-594.950	-371.900
23	-841	737	-1036	1156	-19.725	-27.400	-579.700	-345.113
23.5	-973	854	-1155	1272	-22.838	-30.338	-559.975	-317.713
24	-1030	908	-1242	1372	-24.225	-32.675	-537.138	-287.375
24.5	-1123	1010	-1347	1470	-26.663	-35.213	-512.913	-254.700
25	-1235	1138	-1455	1581	-29.663	-37.950	-486.250	-219.488
25.5	-1330	1202	-1549	1717	-31.650	-40.825	-456.588	-181.538
26	-1246	1145	-1234	1375	-29.888	-32.613	-424.938	-140.713
26.5	-1207	1067	-948	1080	-28.425	-25.350	-395.050	-108.100
27	-1043	943	-658	817	-24.825	-18.438	-366.625	-82.750
27.5	-978	860	-449	600	-22.975	-13.113	-341.800	-64.313
28	-815	700	-150	290	-18.938	-5.500	-318.825	-51.200
28.5	-614	507	-398	549	-14.013	-11.838	-299.888	-45.700
29	-715	586	-427	547	-16.263	-12.175	-285.875	-33.863
29.5	-993	871	24	139	-23.300	-1.438	-269.613	-21.688
30	-1145	1034	91	67	-27.238	0.300	-246.313	-20.250
30.5	-1003	884	94	64	-23.588	0.375	-219.075	-20.550
31	-818	704	103	72	-19.025	0.388	-195.488	-20.925
31.5	-1056	938	124	45	-24.925	0.988	-176.463	-21.313
32	-1463	1343	55	105	-35.075	-0.625	-151.538	-22.300
32.5	-1416	1311	-105	252	-34.088	-4.463	-116.463	-21.675
33	-1428	1322	-275	391	-34.375	-8.325	-82.375	-17.213
33.5	-1980	1860	-299	412	-48.000	-8.888	-48.000	-8.888
Reference Point							0.000	0.000

C305-IM080010

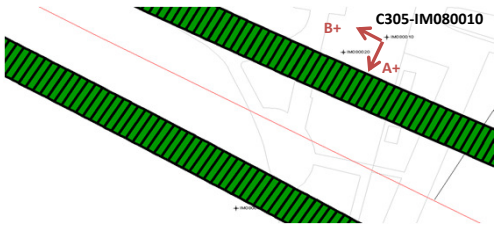


Serial number probe: 1035333

20-9-13 12:46

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	-181	-15	-1477	1540	-2.075	-37.713	-1517.000	-1014.888
1	-93	-97	-1226	1325	0.050	-31.888	-1514.925	-977.175
1.5	-178	-5	-1082	1179	-2.163	-28.263	-1514.975	-945.288
2	-259	78	-975	1066	-4.213	-25.513	-1512.813	-917.025
2.5	-396	212	-931	1028	-7.600	-24.488	-1508.600	-891.513
3	-509	330	-937	1025	-10.488	-24.525	-1501.000	-867.025
3.5	-575	377	-864	963	-11.900	-22.838	-1490.513	-842.500
4	-458	289	-866	968	-9.338	-22.925	-1478.613	-819.663
4.5	-536	352	-830	892	-11.100	-21.525	-1469.275	-796.738
5	-518	326	-814	886	-10.550	-21.250	-1458.175	-775.213
5.5	-464	281	-787	872	-9.313	-20.738	-1447.625	-753.963
6	-465	291	-743	829	-9.450	-19.650	-1438.313	-733.225
6.5	-490	300	-654	721	-9.875	-17.188	-1428.863	-713.575
7	-522	342	-590	686	-10.800	-15.950	-1418.988	-696.388
7.5	-580	411	-787	863	-12.388	-20.625	-1408.188	-680.438
8	-609	427	-752	830	-12.950	-19.775	-1395.800	-659.813
8.5	-596	415	-789	845	-12.638	-20.425	-1382.850	-640.038
9	-609	424	-818	896	-12.913	-21.425	-1370.213	-619.613
9.5	-662	473	-846	916	-14.188	-22.025	-1357.300	-598.188
10	-778	591	-811	882	-17.113	-21.163	-1343.113	-576.163
10.5	-1009	827	-723	791	-22.950	-18.925	-1326.000	-555.000
11	-1026	831	-615	705	-23.213	-16.500	-1303.050	-536.075
11.5	-1003	815	-486	575	-22.725	-13.263	-1279.838	-519.575
12	-979	803	-332	444	-22.275	-9.700	-1257.113	-506.313
12.5	-1037	833	-262	349	-23.375	-7.638	-1234.838	-496.613
13	-1061	875	-142	241	-24.200	-4.788	-1211.463	-488.975
13.5	-1136	953	-141	199	-26.113	-4.250	-1187.263	-484.188
14	-1248	1039	-86	137	-28.588	-2.788	-1161.150	-479.938
14.5	-1341	1137	-81	129	-30.975	-2.625	-1132.563	-477.150
15	-1452	1265	-63	130	-33.963	-2.413	-1101.588	-474.525
15.5	-1541	1349	-79	127	-36.125	-2.575	-1067.625	-472.113
16	-1658	1449	1	116	-38.838	-1.438	-1031.500	-469.538
16.5	-1851	1668	208	-134	-43.988	4.275	-992.663	-468.100
17	-1938	1739	94	-10	-45.963	1.300	-948.675	-472.375
17.5	-1869	1669	18	67	-44.225	-0.613	-902.713	-473.675
18	-1659	1458	2	85	-38.963	-1.038	-858.488	-473.063
18.5	-1448	1257	20	84	-33.813	-0.800	-819.525	-472.025
19	-1448	1248	79	64	-33.700	0.188	-785.713	-471.225
19.5	-1570	1377	186	-106	-36.838	3.650	-752.013	-471.413
20	-1469	1288	-193	272	-34.463	-5.813	-715.175	-475.063
20.5	-1354	1146	-522	615	-31.250	-14.213	-680.713	-469.250
21	-1096	899	-842	895	-24.938	-21.713	-649.463	-455.038
21.5	-799	622	-1135	1209	-17.763	-29.300	-624.525	-433.325
22	-602	385	-1344	1389	-12.338	-34.163	-606.763	-404.025
22.5	-694	521	-1030	1100	-15.188	-26.625	-594.425	-369.863
23	-878	695	-1067	1116	-19.663	-27.288	-579.238	-343.238
23.5	-1003	815	-1168	1236	-22.725	-30.050	-559.575	-315.950
24	-1068	871	-1266	1348	-24.238	-32.675	-536.850	-285.900
24.5	-1154	968	-1366	1418	-26.525	-34.800	-512.613	-253.225
25	-1264	1102	-1477	1519	-29.575	-37.450	-486.088	-218.425
25.5	-1373	1161	-1572	1662	-31.675	-40.425	-456.513	-180.975
26	-1291	1100	-1258	1321	-29.888	-32.238	-424.838	-140.550
26.5	-1238	1036	-969	1029	-28.425	-24.975	-394.950	-108.313
27	-1090	909	-699	778	-24.988	-18.463	-366.525	-83.338
27.5	-1024	822	-494	581	-23.075	-13.438	-341.538	-64.875
28	-854	669	-168	253	-19.038	-5.263	-318.463	-51.438
28.5	-650	472	-427	496	-14.025	-11.538	-299.425	-46.175
29	-754	547	-449	503	-16.263	-11.900	-285.400	-34.638
29.5	-1029	830	6	122	-23.238	-1.450	-269.138	-22.738
30	-1176	1000	78	63	-27.200	0.188	-245.900	-21.288
30.5	-1042	855	67	66	-23.713	0.013	-218.700	-21.475
31	-845	677	90	85	-19.025	0.063	-194.988	-21.488
31.5	-1089	894	91	28	-24.788	0.788	-175.963	-21.550
32	-1500	1297	25	82	-34.963	-0.713	-151.175	-22.338
32.5	-1462	1264	-129	230	-34.075	-4.488	-116.213	-21.625
33	-1468	1279	-291	379	-34.338	-8.375	-82.138	-17.138
33.5	-2014	1810	-297	404	-47.800	-8.763	-47.800	-8.763
Reference Point							0.000	0.000

C305-IM080010



Serial number probe: DI1244

24-9-13 16:13

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	-140	15	-1457	1566	-1.938	-37.788	-1513.438	-1013.763
1	-58	-68	-1201	1354	0.125	-31.938	-1511.500	-975.975
1.5	-139	30	-1061	1201	-2.113	-28.275	-1511.625	-944.038
2	-222	114	-950	1094	-4.200	-25.550	-1509.513	-915.763
2.5	-351	250	-909	1046	-7.513	-24.438	-1505.313	-890.213
3	-474	368	-910	1045	-10.525	-24.438	-1497.800	-865.775
3.5	-530	410	-843	984	-11.750	-22.838	-1487.275	-841.338
4	-419	319	-843	989	-9.225	-22.900	-1475.525	-818.500
4.5	-497	389	-803	918	-11.075	-21.513	-1466.300	-795.600
5	-479	362	-786	913	-10.513	-21.238	-1455.225	-774.088
5.5	-423	315	-763	897	-9.225	-20.750	-1444.713	-752.850
6	-430	322	-723	855	-9.400	-19.725	-1435.488	-732.100
6.5	-451	334	-630	748	-9.813	-17.225	-1426.088	-712.375
7	-486	376	-567	710	-10.775	-15.963	-1416.275	-695.150
7.5	-547	446	-757	887	-12.413	-20.550	-1405.500	-679.188
8	-573	463	-725	849	-12.950	-19.675	-1393.088	-658.638
8.5	-561	447	-763	873	-12.600	-20.450	-1380.138	-638.963
9	-572	459	-788	922	-12.888	-21.375	-1367.538	-618.513
9.5	-618	512	-824	936	-14.125	-22.000	-1354.650	-597.138
10	-739	622	-785	905	-17.013	-21.125	-1340.525	-575.138
10.5	-968	859	-695	819	-22.838	-18.925	-1323.513	-554.013
11	-993	867	-593	728	-23.250	-16.513	-1300.675	-535.088
11.5	-963	851	-465	592	-22.675	-13.213	-1277.425	-518.575
12	-945	840	-311	465	-22.313	-9.700	-1254.750	-505.363
12.5	-992	868	-233	370	-23.250	-7.538	-1232.438	-495.663
13	-1023	915	-112	264	-24.225	-4.700	-1209.188	-488.125
13.5	-1103	985	-110	216	-26.100	-4.075	-1184.963	-483.425
14	-1207	1080	-61	161	-28.588	-2.775	-1158.863	-479.350
14.5	-1304	1176	-54	155	-31.000	-2.613	-1130.275	-476.575
15	-1411	1296	-33	159	-33.838	-2.400	-1099.275	-473.963
15.5	-1499	1382	-49	152	-36.013	-2.513	-1065.438	-471.563
16	-1622	1478	30	143	-38.750	-1.413	-1029.425	-469.050
16.5	-1807	1704	237	-112	-43.888	4.363	-990.675	-467.638
17	-1905	1780	120	19	-46.063	1.263	-946.788	-472.000
17.5	-1826	1698	40	95	-44.050	-0.688	-900.725	-473.263
18	-1614	1499	30	108	-38.913	-0.975	-856.675	-472.575
18.5	-1409	1294	40	107	-33.788	-0.838	-817.763	-471.600
19	-1409	1286	108	93	-33.688	0.188	-783.975	-470.763
19.5	-1537	1409	212	-81	-36.825	3.663	-750.288	-470.950
20	-1427	1322	-164	297	-34.363	-5.763	-713.463	-474.613
20.5	-1315	1186	-503	644	-31.263	-14.338	-679.100	-468.850
21	-1053	932	-812	922	-24.813	-21.675	-647.838	-454.513
21.5	-759	661	-1114	1231	-17.750	-29.313	-623.025	-432.838
22	-558	426	-1315	1414	-12.300	-34.113	-605.275	-403.525
22.5	-661	557	-1005	1128	-15.225	-26.663	-592.975	-369.413
23	-835	734	-1037	1136	-19.613	-27.163	-577.750	-342.750
23.5	-959	850	-1142	1261	-22.613	-30.038	-558.138	-315.588
24	-1026	900	-1244	1366	-24.075	-32.625	-535.525	-285.550
24.5	-1118	1002	-1344	1436	-26.500	-34.750	-511.450	-252.925
25	-1231	1131	-1457	1548	-29.525	-37.563	-484.950	-218.175
25.5	-1332	1201	-1545	1680	-31.663	-40.313	-455.425	-180.613
26	-1246	1134	-1229	1345	-29.750	-32.175	-423.763	-140.300
26.5	-1204	1069	-947	1054	-28.413	-25.013	-394.013	-108.125
27	-1049	944	-675	801	-24.913	-18.450	-365.600	-83.113
27.5	-979	855	-466	603	-22.925	-13.363	-340.688	-64.663
28	-815	698	-148	281	-18.913	-5.363	-317.763	-51.300
28.5	-609	511	-402	519	-14.000	-11.513	-298.850	-45.938
29	-710	587	-428	531	-16.213	-11.988	-284.850	-34.425
29.5	-985	865	27	143	-23.125	-1.450	-268.638	-22.438
30	-1143	1032	99	85	-27.188	0.175	-245.513	-20.988
30.5	-1000	888	93	84	-23.600	0.113	-218.325	-21.163
31	-811	708	120	107	-18.988	0.163	-194.725	-21.275
31.5	-1053	930	119	48	-24.788	0.888	-175.738	-21.438
32	-1458	1332	55	100	-34.875	-0.563	-150.950	-22.325
32.5	-1419	1305	-109	250	-34.050	-4.488	-116.075	-21.763
33	-1424	1314	-270	403	-34.225	-8.413	-82.025	-17.275
33.5	-1979	1845	-276	433	-47.800	-8.863	-47.800	-8.863
Reference Point							0.000	0.000

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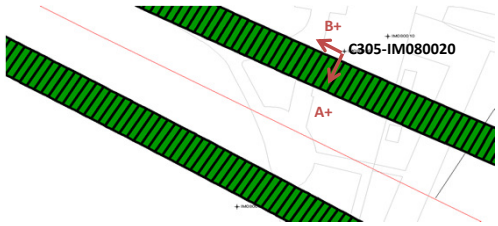

Serial number probe: 1035333

28-8-13 15:25

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	-36	-172	782	-698	1.700	18.500	352.363	1705.025
1	-159	-38	1006	-899	-1.513	23.813	350.663	1686.525
1.5	-291	71	975	-863	-4.525	22.975	352.175	1662.713
2	-286	107	727	-634	-4.913	17.013	356.700	1639.738
2.5	-308	103	563	-468	-5.138	12.888	361.613	1622.725
3	-313	92	503	-403	-5.063	11.325	366.750	1609.838
3.5	-363	157	312	-226	-6.500	6.725	371.813	1598.513
4	-394	211	162	-60	-7.563	2.775	378.313	1591.788
4.5	-591	384	-17	151	-12.188	-2.100	385.875	1589.013
5	-590	393	350	-249	-12.288	7.488	398.063	1591.113
5.5	-416	208	626	-543	-7.800	14.613	410.350	1583.625
6	-204	-5	858	-771	-2.488	20.363	418.150	1569.013
6.5	-27	-179	1045	-941	1.900	24.825	420.638	1548.650
7	44	-248	1342	-1241	3.650	32.288	418.738	1523.825
7.5	144	-330	1254	-1156	5.925	30.125	415.088	1491.538
8	154	-355	1124	-1007	6.363	26.638	409.163	1461.413
8.5	240	-452	1057	-963	8.650	25.250	402.800	1434.775
9	371	-555	1051	-947	11.575	24.975	394.150	1409.525
9.5	473	-691	1074	-969	14.550	25.538	382.575	1384.550
10	569	-767	1037	-936	16.700	24.663	368.025	1359.013
10.5	406	-596	910	-813	12.525	21.538	351.325	1334.350
11	268	-454	776	-680	9.025	18.200	338.800	1312.813
11.5	142	-356	674	-589	6.225	15.788	329.775	1294.613
12	80	-296	591	-491	4.700	13.525	323.550	1278.825
12.5	44	-233	487	-399	3.463	11.075	318.850	1265.300
13	-4	-183	409	-331	2.238	9.250	315.388	1254.225
13.5	-2	-207	272	-192	2.563	5.800	313.150	1244.975
14	217	-431	379	-278	8.100	8.213	310.588	1239.175
14.5	461	-665	566	-476	14.075	13.025	302.488	1230.963
15	736	-928	816	-712	20.800	19.100	288.413	1217.938
15.5	1037	-1239	1077	-984	28.450	25.763	267.613	1198.838
16	1268	-1469	1273	-1192	34.213	30.813	239.163	1173.075
16.5	1331	-1546	1658	-1518	35.963	39.700	204.950	1142.263
17	1381	-1570	1601	-1524	36.888	39.063	168.988	1102.563
17.5	1416	-1607	1580	-1483	37.788	38.288	132.100	1063.500
18	1362	-1562	1528	-1432	36.550	37.000	94.313	1025.213
18.5	1216	-1423	1441	-1341	32.988	34.775	57.763	988.213
19	1096	-1293	1329	-1242	29.863	32.138	24.775	953.438
19.5	900	-1098	1239	-1151	24.975	29.875	-5.087	921.300
20	724	-917	1297	-1195	20.513	31.150	-30.063	891.425
20.5	556	-747	1349	-1267	16.288	32.700	-50.575	860.275
21	376	-589	1359	-1257	12.063	32.700	-66.863	827.575
21.5	263	-459	1370	-1268	9.025	32.975	-78.925	794.875
22	124	-317	1405	-1295	5.513	33.750	-87.950	761.900
22.5	-190	-12	1560	-1441	-2.225	37.513	-93.463	728.150
23	-342	134	1509	-1406	-5.950	36.438	-91.238	690.638
23.5	-501	310	1417	-1316	-10.138	34.163	-85.288	654.200
24	-631	419	1387	-1292	-13.125	33.488	-75.150	620.038
24.5	-737	546	1324	-1221	-16.038	31.813	-62.025	586.550
25	-880	670	1215	-1122	-19.375	29.213	-45.988	554.738
25.5	-883	678	986	-885	-19.513	23.388	-26.613	525.525
26	-854	670	951	-840	-19.050	22.388	-7.100	502.138
26.5	-711	522	880	-764	-15.413	20.550	11.950	479.750
27	-524	313	740	-649	-10.463	17.363	27.363	459.200
27.5	-348	167	684	-585	-6.438	15.863	37.825	441.838
28	-334	152	763	-674	-6.075	17.963	44.263	425.975
28.5	-242	32	812	-721	-3.425	19.163	50.338	408.013
29	-211	17	922	-828	-2.850	21.875	53.763	388.850
29.5	-210	21	992	-895	-2.888	23.588	56.613	366.975
30	-98	-131	1149	-1045	0.413	27.425	59.500	343.388
30.5	78	-284	1283	-1181	4.525	30.800	59.088	315.963
31	172	-363	1216	-1130	6.688	29.325	54.563	285.163
31.5	66	-263	1365	-1261	4.113	32.825	47.875	255.838
32	57	-256	1505	-1433	3.913	36.725	43.763	223.013
32.5	112	-310	1735	-1656	5.275	42.388	39.850	186.288
33	365	-561	2021	-1936	11.575	49.463	34.575	143.900
33.5	434	-644	2057	-1966	13.475	50.288	23.000	94.438
34	282	-480	1804	-1728	9.525	44.150	9.525	44.150
Reference Point							0.000	0.000

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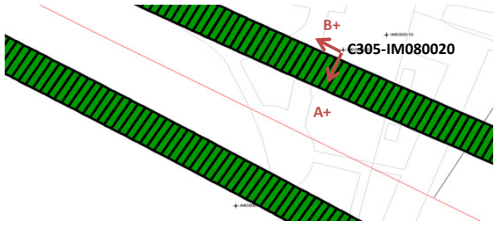

Serial number probe: DI1244

29-8-13 10:03

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	7	-142	805	-672	1.863	18.463	356.200	1706.538
1	-124	-5	1036	-871	-1.488	23.838	354.338	1688.075
1.5	-254	104	1003	-838	-4.475	23.013	355.825	1664.238
2	-251	138	757	-615	-4.863	17.150	360.300	1641.225
2.5	-264	140	592	-449	-5.050	13.013	365.163	1624.075
3	-269	128	524	-383	-4.963	11.338	370.213	1611.063
3.5	-321	189	341	-200	-6.375	6.763	375.175	1599.725
4	-359	245	190	-36	-7.550	2.825	381.550	1592.963
4.5	-557	417	11	179	-12.175	-2.100	389.100	1590.138
5	-546	426	377	-230	-12.150	7.588	401.275	1592.238
5.5	-373	243	656	-524	-7.700	14.750	413.425	1584.650
6	-161	27	879	-747	-2.350	20.325	421.125	1569.900
6.5	8	-140	1070	-920	1.850	24.875	423.475	1549.575
7	82	-218	1366	-1215	3.750	32.263	421.625	1524.700
7.5	182	-295	1276	-1129	5.963	30.063	417.875	1492.438
8	188	-324	1147	-989	6.400	26.700	411.913	1462.375
8.5	279	-414	1084	-940	8.663	25.300	405.513	1435.675
9	407	-523	1076	-929	11.625	25.063	396.850	1410.375
9.5	512	-654	1098	-941	14.575	25.488	385.225	1385.313
10	613	-734	1060	-912	16.838	24.650	370.650	1359.825
10.5	444	-565	930	-793	12.613	21.538	353.813	1335.175
11	306	-416	804	-662	9.025	18.325	341.200	1313.638
11.5	182	-320	700	-568	6.275	15.850	332.175	1295.313
12	119	-256	619	-463	4.688	13.525	325.900	1279.463
12.5	79	-198	509	-372	3.463	11.013	321.213	1265.938
13	38	-152	438	-307	2.375	9.313	317.750	1254.925
13.5	40	-174	299	-165	2.675	5.800	315.375	1245.613
14	257	-393	407	-252	8.125	8.238	312.700	1239.813
14.5	504	-626	596	-453	14.125	13.113	304.575	1231.575
15	780	-893	844	-693	20.913	19.213	290.450	1218.463
15.5	1073	-1199	1098	-957	28.400	25.688	269.538	1199.250
16	1305	-1439	1293	-1167	34.300	30.750	241.138	1173.563
16.5	1368	-1510	1678	-1499	35.975	39.713	206.838	1142.813
17	1424	-1538	1630	-1501	37.025	39.138	170.863	1103.100
17.5	1460	-1573	1601	-1460	37.913	38.263	133.838	1063.963
18	1401	-1528	1552	-1405	36.613	36.963	95.925	1025.700
18.5	1259	-1393	1462	-1318	33.150	34.750	59.313	988.738
19	1135	-1253	1358	-1214	29.850	32.150	26.163	953.988
19.5	935	-1065	1264	-1127	25.000	29.888	-3.687	921.838
20	765	-880	1318	-1172	20.563	31.125	-28.688	891.950
20.5	592	-713	1374	-1240	16.313	32.675	-49.250	860.825
21	418	-554	1384	-1235	12.150	32.738	-65.563	828.150
21.5	301	-426	1391	-1249	9.088	33.000	-77.713	795.413
22	165	-277	1426	-1269	5.525	33.688	-86.800	762.413
22.5	-152	18	1581	-1418	-2.125	37.488	-92.325	728.725
23	-303	170	1529	-1379	-5.913	36.350	-90.200	691.238
23.5	-465	350	1445	-1288	-10.188	34.163	-84.288	654.888
24	-587	449	1410	-1272	-12.950	33.525	-74.100	620.725
24.5	-697	586	1349	-1201	-16.038	31.875	-61.150	587.200
25	-839	707	1236	-1095	-19.325	29.138	-45.113	555.325
25.5	-848	715	1008	-863	-19.538	23.388	-25.788	526.188
26	-818	705	978	-822	-19.038	22.500	-6.250	502.800
26.5	-676	560	905	-737	-15.450	20.525	12.788	480.300
27	-483	345	767	-625	-10.350	17.400	28.238	459.775
27.5	-309	199	704	-557	-6.350	15.763	38.588	442.375
28	-300	185	787	-653	-6.063	18.000	44.938	426.613
28.5	-208	72	842	-703	-3.500	19.313	51.000	408.613
29	-177	49	948	-805	-2.825	21.913	54.500	389.300
29.5	-174	56	1015	-872	-2.875	23.588	57.325	367.388
30	-57	-101	1175	-1027	0.550	27.525	60.200	343.800
30.5	121	-253	1304	-1163	4.675	30.838	59.650	316.275
31	211	-332	1242	-1103	6.788	29.313	54.975	285.438
31.5	104	-232	1391	-1242	4.200	32.913	48.188	256.125
32	94	-218	1533	-1405	3.900	36.725	43.988	223.213
32.5	155	-273	1759	-1628	5.350	42.338	40.088	186.488
33	407	-526	2051	-1914	11.663	49.563	34.738	144.150
33.5	471	-611	2083	-1947	13.525	50.375	23.075	94.588
34	319	-445	1832	-1705	9.550	44.213	9.550	44.213
Reference Point							0.000	0.000

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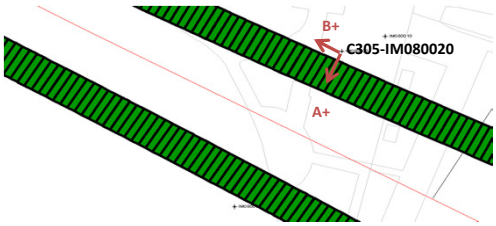

Serial number probe: 1035333

28-8-13 17:02

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	-35	-244	790	-687	2.613	18.463	352.775	1707.163
1	-165	-76	997	-909	-1.113	23.825	350.163	1688.700
1.5	-303	68	977	-880	-4.638	23.213	351.275	1664.875
2	-290	97	731	-642	-4.838	17.163	355.913	1641.663
2.5	-306	100	569	-472	-5.075	13.013	360.750	1624.500
3	-306	89	489	-416	-4.938	11.313	365.825	1611.488
3.5	-362	142	312	-225	-6.300	6.713	370.763	1600.175
4	-403	210	157	-69	-7.663	2.825	377.063	1593.463
4.5	-591	386	1	137	-12.213	-1.700	384.725	1590.638
5	-591	375	346	-280	-12.075	7.825	396.938	1592.338
5.5	-419	201	624	-538	-7.750	14.525	409.013	1584.513
6	-202	-17	850	-803	-2.313	20.663	416.763	1569.988
6.5	-31	-183	1035	-967	1.900	25.025	419.075	1549.325
7	44	-249	1328	-1239	3.663	32.088	417.175	1524.300
7.5	139	-329	1243	-1138	5.850	29.763	413.513	1492.213
8	145	-360	1117	-1029	6.313	26.825	407.663	1462.450
8.5	237	-446	1059	-968	8.538	25.338	401.350	1435.625
9	362	-566	1049	-967	11.600	25.200	392.813	1410.288
9.5	471	-693	1065	-966	14.550	25.388	381.213	1385.088
10	574	-759	1048	-940	16.663	24.850	366.663	1359.700
10.5	402	-606	910	-817	12.600	21.588	350.000	1334.850
11	264	-457	782	-694	9.013	18.450	337.400	1313.263
11.5	143	-361	678	-585	6.300	15.788	328.388	1294.813
12	79	-300	584	-491	4.738	13.438	322.088	1279.025
12.5	43	-241	481	-396	3.550	10.963	317.350	1265.588
13	-10	-185	412	-356	2.188	9.600	313.800	1254.625
13.5	-5	-209	271	-208	2.550	5.988	311.613	1245.025
14	216	-432	374	-305	8.100	8.488	309.063	1239.038
14.5	465	-659	555	-495	14.050	13.125	300.963	1230.550
15	742	-935	803	-747	20.963	19.375	286.913	1217.425
15.5	1029	-1229	1062	-999	28.225	25.763	265.950	1198.050
16	1265	-1481	1262	-1201	34.325	30.788	237.725	1172.288
16.5	1330	-1544	1648	-1513	35.925	39.513	203.400	1141.500
17	1381	-1566	1596	-1506	36.838	38.775	167.475	1101.988
17.5	1414	-1616	1571	-1472	37.875	38.038	130.638	1063.213
18	1362	-1563	1508	-1421	36.563	36.613	92.763	1025.175
18.5	1216	-1407	1425	-1343	32.788	34.600	56.200	988.563
19	1100	-1285	1321	-1220	29.813	31.763	23.413	953.963
19.5	888	-1102	1252	-1137	24.875	29.863	-6.400	922.200
20	723	-918	1302	-1197	20.513	31.238	-31.275	892.338
20.5	547	-745	1353	-1254	16.150	32.588	-51.788	861.100
21	377	-585	1361	-1250	12.025	32.638	-67.938	828.513
21.5	266	-458	1368	-1278	9.050	33.075	-79.963	795.875
22	117	-318	1385	-1292	5.438	33.463	-89.013	762.800
22.5	-194	-24	1558	-1454	-2.125	37.650	-94.450	729.338
23	-346	132	1492	-1405	-5.975	36.213	-92.325	691.688
23.5	-507	313	1404	-1327	-10.250	34.138	-86.350	655.475
24	-627	413	1377	-1299	-13.000	33.450	-76.100	621.338
24.5	-743	556	1316	-1218	-16.238	31.675	-63.100	587.888
25	-883	671	1205	-1131	-19.425	29.200	-46.863	556.213
25.5	-888	675	979	-894	-19.538	23.413	-27.438	527.013
26	-856	662	944	-858	-18.975	22.525	-7.900	503.600
26.5	-719	513	869	-793	-15.400	20.775	11.075	481.075
27	-531	312	746	-631	-10.538	17.213	26.475	460.300
27.5	-354	165	673	-591	-6.488	15.800	37.013	443.088
28	-344	148	776	-679	-6.150	18.188	43.500	427.288
28.5	-250	32	819	-726	-3.525	19.313	49.650	409.100
29	-218	19	921	-821	-2.963	21.775	53.175	389.788
29.5	-221	16	1007	-887	-2.963	23.675	56.138	368.013
30	-98	-137	1168	-1064	0.488	27.900	59.100	344.338
30.5	75	-283	1287	-1182	4.475	30.863	58.613	316.438
31	165	-370	1215	-1127	6.688	29.275	54.138	285.575
31.5	54	-270	1361	-1272	4.050	32.913	47.450	256.300
32	43	-250	1522	-1430	3.663	36.900	43.400	223.388
32.5	114	-307	1727	-1644	5.263	42.138	39.738	186.488
33	362	-563	2047	-1947	11.563	49.925	34.475	144.350
33.5	425	-650	2056	-1977	13.438	50.413	22.913	94.425
34	279	-479	1794	-1727	9.475	44.013	9.475	44.013
Reference Point							0.000	0.000

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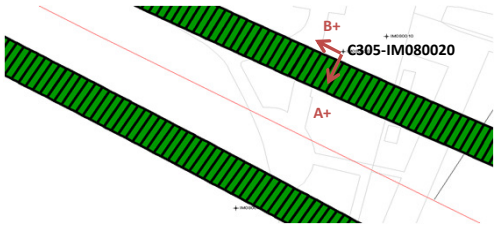

Serial number probe: DI1244

29-8-13 12:16

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	5	-209	813	-666	2.675	18.488	356.288	1708.938
1	-124	-39	1019	-887	-1.063	23.825	353.613	1690.450
1.5	-260	107	998	-857	-4.588	23.188	354.675	1666.625
2	-255	131	754	-618	-4.825	17.150	359.263	1643.438
2.5	-266	133	592	-449	-4.988	13.013	364.088	1626.288
3	-269	125	515	-393	-4.925	11.350	369.075	1613.275
3.5	-320	180	338	-198	-6.250	6.700	374.000	1601.925
4	-362	247	184	-44	-7.613	2.850	380.250	1595.225
4.5	-554	418	24	157	-12.150	-1.663	387.863	1592.375
5	-548	411	369	-260	-11.988	7.863	400.013	1594.038
5.5	-379	238	652	-515	-7.713	14.588	412.000	1586.175
6	-166	18	877	-783	-2.300	20.750	419.713	1571.588
6.5	4	-150	1064	-946	1.925	25.125	422.013	1550.838
7	84	-212	1353	-1218	3.700	32.138	420.088	1525.713
7.5	180	-297	1265	-1119	5.963	29.800	416.388	1493.575
8	185	-327	1146	-1004	6.400	26.875	410.425	1463.775
8.5	279	-413	1082	-942	8.650	25.300	404.025	1436.900
9	405	-532	1075	-942	11.713	25.213	395.375	1411.600
9.5	514	-662	1092	-947	14.700	25.488	383.663	1386.388
10	609	-724	1069	-915	16.663	24.800	368.963	1360.900
10.5	440	-574	938	-792	12.675	21.625	352.300	1336.100
11	301	-421	803	-669	9.025	18.400	339.625	1314.475
11.5	180	-328	702	-562	6.350	15.800	330.600	1296.075
12	120	-263	605	-468	4.788	13.413	324.250	1280.275
12.5	78	-206	506	-376	3.550	11.025	319.463	1266.863
13	28	-154	439	-332	2.275	9.638	315.913	1255.838
13.5	34	-172	298	-183	2.575	6.013	313.638	1246.200
14	254	-401	399	-281	8.188	8.500	311.063	1240.188
14.5	501	-628	576	-476	14.113	13.150	302.875	1231.688
15	777	-897	830	-727	20.925	19.463	288.763	1218.538
15.5	1069	-1194	1085	-972	28.288	25.713	267.838	1199.075
16	1306	-1442	1289	-1174	34.350	30.788	239.550	1173.363
16.5	1366	-1512	1677	-1493	35.975	39.625	205.200	1142.575
17	1419	-1533	1622	-1486	36.900	38.850	169.225	1102.950
17.5	1453	-1582	1597	-1453	37.938	38.125	132.325	1064.100
18	1403	-1532	1537	-1401	36.688	36.725	94.388	1025.975
18.5	1258	-1373	1452	-1321	32.888	34.663	57.700	989.250
19	1135	-1249	1350	-1199	29.800	31.863	24.813	954.588
19.5	929	-1064	1278	-1114	24.913	29.900	-4.988	922.725
20	766	-881	1327	-1173	20.588	31.250	-29.900	892.825
20.5	585	-714	1377	-1231	16.238	32.600	-50.488	861.575
21	414	-550	1383	-1228	12.050	32.638	-66.725	828.975
21.5	301	-425	1390	-1253	9.075	33.038	-78.775	796.338
22	159	-283	1412	-1271	5.525	33.538	-87.850	763.300
22.5	-156	11	1579	-1427	-2.088	37.575	-93.375	729.763
23	-305	167	1520	-1379	-5.900	36.238	-91.288	692.188
23.5	-472	348	1433	-1300	-10.250	34.163	-85.388	655.950
24	-586	444	1399	-1273	-12.875	33.400	-75.138	621.788
24.5	-707	590	1341	-1198	-16.213	31.738	-62.263	588.388
25	-846	704	1234	-1105	-19.375	29.238	-46.050	556.650
25.5	-852	708	1005	-869	-19.500	23.425	-26.675	527.413
26	-821	697	973	-832	-18.975	22.563	-7.175	503.988
26.5	-680	551	898	-774	-15.388	20.900	11.800	481.425
27	-488	344	769	-606	-10.400	17.188	27.188	460.525
27.5	-316	197	695	-564	-6.413	15.738	37.588	443.338
28	-308	183	802	-653	-6.138	18.188	44.000	427.600
28.5	-212	69	848	-702	-3.513	19.375	50.138	409.413
29	-176	54	945	-796	-2.875	21.763	53.650	390.038
29.5	-180	54	1031	-865	-2.925	23.700	56.525	368.275
30	-63	-103	1191	-1037	0.500	27.850	59.450	344.575
30.5	112	-250	1314	-1157	4.525	30.888	58.950	316.725
31	204	-332	1236	-1106	6.700	29.275	54.425	285.838
31.5	97	-232	1388	-1247	4.113	32.938	47.725	256.563
32	83	-217	1550	-1408	3.750	36.975	43.613	223.625
32.5	150	-272	1753	-1620	5.275	42.163	39.863	186.650
33	402	-528	2074	-1920	11.625	49.925	34.588	144.488
33.5	462	-613	2084	-1952	13.438	50.450	22.963	94.563
34	321	-441	1821	-1708	9.525	44.113	9.525	44.113
Reference Point							0.000	0.000

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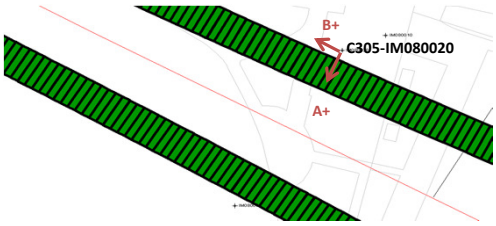
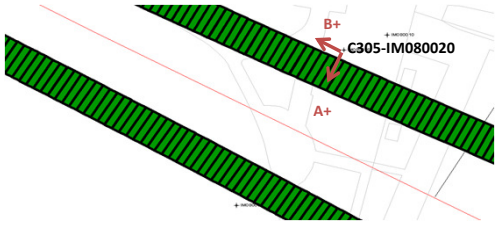


Serial number probe: 1035333

28-8-13 18:02

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	46	-221	778	-683	3.338	18.263	356.000	1704.850
1	-138	-67	1047	-902	-0.888	24.363	352.663	1686.588
1.5	-287	112	936	-852	-4.988	22.350	353.550	1662.225
2	-286	92	720	-638	-4.725	16.975	358.538	1639.875
2.5	-303	103	561	-460	-5.075	12.763	363.263	1622.900
3	-288	95	489	-404	-4.788	11.163	368.338	1610.138
3.5	-348	164	288	-195	-6.400	6.038	373.125	1598.975
4	-389	214	154	-67	-7.538	2.763	379.525	1592.938
4.5	-582	394	-1	122	-12.200	-1.538	387.063	1590.175
5	-562	388	391	-274	-11.875	8.313	399.263	1591.713
5.5	-395	196	630	-549	-7.388	14.738	411.138	1583.400
6	-178	-8	854	-775	-2.125	20.363	418.525	1568.663
6.5	-36	-177	1073	-945	1.763	25.225	420.650	1548.300
7	58	-232	1350	-1250	3.625	32.500	418.888	1523.075
7.5	150	-330	1211	-1127	6.000	29.225	415.263	1490.575
8	166	-358	1120	-1022	6.550	26.775	409.263	1461.350
8.5	258	-436	1055	-967	8.675	25.275	402.713	1434.575
9	377	-560	1056	-962	11.713	25.225	394.038	1409.300
9.5	498	-680	1062	-968	14.725	25.375	382.325	1384.075
10	582	-759	1038	-934	16.763	24.650	367.600	1358.700
10.5	404	-577	886	-818	12.263	21.300	350.838	1334.050
11	248	-452	767	-688	8.750	18.188	338.575	1312.750
11.5	156	-333	668	-578	6.113	15.575	329.825	1294.563
12	90	-279	580	-488	4.613	13.350	323.713	1278.988
12.5	48	-216	482	-387	3.300	10.863	319.100	1265.638
13	-6	-180	436	-317	2.175	9.413	315.800	1254.775
13.5	8	-208	272	-177	2.700	5.613	313.625	1245.363
14	251	-418	377	-288	8.363	8.313	310.925	1239.750
14.5	490	-662	582	-480	14.400	13.275	302.563	1231.438
15	755	-945	832	-733	21.250	19.563	288.163	1218.163
15.5	1039	-1238	1120	-994	28.463	26.425	266.913	1198.600
16	1305	-1478	1312	-1189	34.788	31.263	238.450	1172.175
16.5	1342	-1531	1658	-1528	35.913	39.825	203.663	1140.913
17	1386	-1559	1604	-1500	36.813	38.800	167.750	1101.088
17.5	1412	-1607	1579	-1487	37.738	38.325	130.938	1062.288
18	1361	-1541	1525	-1428	36.275	36.913	93.200	1023.963
18.5	1215	-1399	1432	-1332	32.675	34.550	56.925	987.050
19	1103	-1290	1331	-1236	29.913	32.088	24.250	952.500
19.5	879	-1083	1203	-1120	24.525	29.038	-5.663	920.413
20	698	-905	1324	-1203	20.038	31.588	-30.188	891.375
20.5	538	-730	1348	-1237	15.850	32.313	-50.225	859.788
21	393	-558	1356	-1249	11.888	32.563	-66.075	827.475
21.5	267	-453	1356	-1257	9.000	32.663	-77.963	794.913
22	103	-287	1400	-1292	4.875	33.650	-86.963	762.250
22.5	-207	5	1542	-1450	-2.650	37.400	-91.838	728.600
23	-332	154	1485	-1394	-6.075	35.988	-89.188	691.200
23.5	-505	312	1416	-1303	-10.213	33.988	-83.113	655.213
24	-624	428	1373	-1281	-13.150	33.175	-72.900	621.225
24.5	-734	572	1307	-1197	-16.325	31.300	-59.750	588.050
25	-861	675	1202	-1109	-19.200	28.888	-43.425	556.750
25.5	-864	677	985	-875	-19.263	23.250	-24.225	527.863
26	-838	664	924	-845	-18.775	22.113	-4.962	504.613
26.5	-698	493	883	-797	-14.888	21.000	13.813	482.500
27	-495	312	756	-636	-10.088	17.400	28.700	461.500
27.5	-323	154	697	-594	-5.963	16.138	38.788	444.100
28	-337	141	789	-677	-5.975	18.325	44.750	427.963
28.5	-222	42	830	-720	-3.300	19.375	50.725	409.638
29	-196	24	924	-805	-2.750	21.613	54.025	390.263
29.5	-199	24	1031	-863	-2.788	23.675	56.775	368.650
30	-72	-137	1134	-1057	0.813	27.388	59.563	344.975
30.5	96	-272	1275	-1169	4.600	30.550	58.750	317.588
31	188	-355	1248	-1108	6.788	29.450	54.150	287.038
31.5	56	-249	1390	-1256	3.813	33.075	47.363	257.588
32	60	-245	1568	-1433	3.813	37.513	43.550	224.513
32.5	131	-307	1766	-1649	5.475	42.688	39.738	187.000
33	380	-572	2067	-1945	11.900	50.150	34.263	144.313
33.5	438	-617	2047	-1947	13.188	49.925	22.363	94.163
34	263	-471	1813	-1726	9.175	44.238	9.175	44.238
Reference Point							0.000	0.000

C305-IM080020

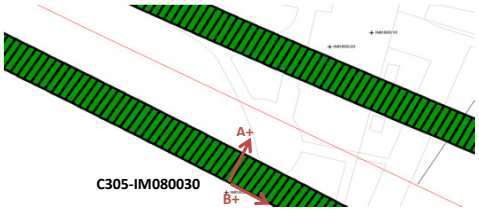


Serial number probe: DI1244

29-8-13 13:59

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	87	-185	803	-659	3.400	18.275	359.088	1706.613
1	-96	-30	1071	-884	-0.825	24.438	355.688	1688.338
1.5	-245	143	961	-834	-4.850	22.438	356.513	1663.900
2	-245	133	751	-614	-4.725	17.063	361.363	1641.463
2.5	-258	138	584	-433	-4.950	12.713	366.088	1624.400
3	-253	136	518	-386	-4.863	11.300	371.038	1611.688
3.5	-309	205	315	-173	-6.425	6.100	375.900	1600.388
4	-350	248	173	-39	-7.475	2.650	382.325	1594.288
4.5	-549	425	28	144	-12.175	-1.450	389.800	1591.638
5	-522	427	412	-246	-11.863	8.225	401.975	1593.088
5.5	-352	232	660	-521	-7.300	14.763	413.838	1584.863
6	-134	32	873	-746	-2.075	20.238	421.138	1570.100
6.5	7	-141	1095	-925	1.850	25.250	423.213	1549.863
7	93	-198	1378	-1224	3.638	32.525	421.363	1524.613
7.5	190	-290	1240	-1102	6.000	29.275	417.725	1492.088
8	203	-318	1139	-995	6.513	26.675	411.725	1462.813
8.5	292	-402	1081	-942	8.675	25.288	405.213	1436.138
9	415	-530	1084	-940	11.813	25.300	396.538	1410.850
9.5	531	-647	1091	-939	14.725	25.375	384.725	1385.550
10	627	-719	1061	-917	16.825	24.725	370.000	1360.175
10.5	442	-544	913	-790	12.325	21.288	353.175	1335.450
11	283	-417	790	-664	8.750	18.175	340.850	1314.163
11.5	195	-303	698	-554	6.225	15.650	332.100	1295.988
12	129	-248	607	-467	4.713	13.425	325.875	1280.338
12.5	84	-180	502	-360	3.300	10.775	321.163	1266.913
13	30	-146	461	-291	2.200	9.400	317.863	1256.138
13.5	52	-174	295	-157	2.825	5.650	315.663	1246.738
14	285	-389	408	-266	8.425	8.425	312.838	1241.088
14.5	530	-628	604	-451	14.475	13.188	304.413	1232.663
15	790	-913	859	-710	21.288	19.613	289.938	1219.475
15.5	1083	-1206	1148	-968	28.613	26.450	268.650	1199.863
16	1339	-1440	1338	-1172	34.738	31.375	240.038	1173.413
16.5	1376	-1495	1682	-1508	35.888	39.875	205.300	1142.038
17	1426	-1529	1623	-1480	36.938	38.788	169.413	1102.163
17.5	1450	-1567	1604	-1468	37.713	38.400	132.475	1063.375
18	1395	-1511	1552	-1411	36.325	37.038	94.763	1024.975
18.5	1258	-1368	1452	-1314	32.825	34.575	58.438	987.938
19	1145	-1249	1360	-1216	29.925	32.200	25.613	953.363
19.5	918	-1046	1224	-1096	24.550	29.000	-4.313	921.163
20	742	-864	1343	-1183	20.075	31.575	-28.863	892.163
20.5	573	-697	1376	-1216	15.875	32.400	-48.938	860.588
21	427	-529	1381	-1226	11.950	32.588	-64.813	828.188
21.5	301	-413	1387	-1229	8.925	32.700	-76.763	795.600
22	148	-252	1420	-1265	5.000	33.563	-85.688	762.900
22.5	-166	39	1571	-1431	-2.563	37.525	-90.688	729.338
23	-288	193	1516	-1375	-6.013	36.138	-88.125	691.813
23.5	-470	348	1446	-1284	-10.225	34.125	-82.113	655.675
24	-581	465	1401	-1257	-13.075	33.225	-71.888	621.550
24.5	-696	603	1335	-1169	-16.238	31.300	-58.813	588.325
25	-828	710	1224	-1089	-19.225	28.913	-42.575	557.025
25.5	-831	715	1009	-853	-19.325	23.275	-23.350	528.113
26	-801	696	947	-828	-18.713	22.188	-4.025	504.838
26.5	-662	531	907	-774	-14.913	21.013	14.688	482.650
27	-455	343	775	-616	-9.975	17.388	29.600	461.638
27.5	-287	193	719	-571	-6.000	16.125	39.575	444.250
28	-296	177	809	-656	-5.913	18.313	45.575	428.125
28.5	-183	74	859	-691	-3.213	19.375	51.488	409.813
29	-160	54	948	-779	-2.675	21.588	54.700	390.438
29.5	-164	58	1056	-843	-2.775	23.738	57.375	368.850
30	-37	-102	1163	-1034	0.813	27.463	60.150	345.113
30.5	133	-241	1294	-1145	4.675	30.488	59.338	317.650
31	227	-318	1268	-1084	6.813	29.400	54.663	287.163
31.5	98	-214	1418	-1235	3.900	33.163	47.850	257.763
32	105	-205	1595	-1404	3.875	37.488	43.950	224.600
32.5	171	-278	1794	-1631	5.613	42.813	40.075	187.113
33	425	-540	2090	-1924	12.063	50.175	34.463	144.300
33.5	472	-586	2074	-1925	13.225	49.988	22.400	94.125
34	302	-432	1833	-1698	9.175	44.138	9.175	44.138
Reference Point							0.000	0.000

C305-IM080030



Serial number probe: 1035333

28-8-13 9:12

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	-11	-192	677	-598	2.263	15.938	-63.450	-1252.575
1	156	-333	540	-454	6.113	12.425	-65.713	-1268.513
1.5	178	-370	273	-174	6.850	5.588	-71.825	-1280.938
2	380	-560	227	-149	11.750	4.700	-78.675	-1286.525
2.5	447	-641	27	101	13.600	-0.925	-90.425	-1291.225
3	274	-451	-291	402	9.063	-8.663	-104.025	-1290.300
3.5	115	-300	-774	902	5.188	-20.950	-113.088	-1281.638
4	96	-295	-998	1087	4.888	-26.063	-118.275	-1260.688
4.5	94	-284	-896	1003	4.725	-23.738	-123.163	-1234.625
5	169	-369	-730	815	6.725	-19.313	-127.888	-1210.888
5.5	157	-345	-735	825	6.275	-19.500	-134.613	-1191.575
6	108	-302	-772	870	5.125	-20.525	-140.888	-1172.075
6.5	71	-253	-770	874	4.050	-20.550	-146.013	-1151.550
7	-7	-195	-780	882	2.350	-20.775	-150.063	-1131.000
7.5	88	-261	-766	890	4.363	-20.700	-152.413	-1110.225
8	246	-447	-800	888	8.663	-21.100	-156.775	-1089.525
8.5	-35	-173	-781	877	1.725	-20.725	-165.438	-1068.425
9	-380	202	-799	897	-7.275	-21.200	-167.163	-1047.700
9.5	-687	495	-823	919	-14.775	-21.775	-159.888	-1026.500
10	-882	691	-805	900	-19.663	-21.313	-145.113	-1004.725
10.5	-1044	847	-818	929	-23.638	-21.838	-125.450	-983.413
11	-1008	834	-784	880	-23.025	-20.800	-101.813	-961.575
11.5	-1005	809	-862	955	-22.675	-22.713	-78.788	-940.775
12	-1017	824	-919	1021	-23.013	-24.250	-56.113	-918.063
12.5	-1033	847	-967	1058	-23.500	-25.313	-33.100	-893.813
13	-1033	858	-1023	1119	-23.638	-26.775	-9.600	-868.500
13.5	-933	743	-1002	1123	-20.950	-26.563	14.038	-841.725
14	-627	414	-782	901	-13.013	-21.038	34.988	-815.163
14.5	-479	285	-617	730	-9.550	-16.838	48.000	-794.125
15	-319	147	-499	601	-5.825	-13.750	57.550	-777.288
15.5	-207	11	-429	548	-2.725	-12.213	63.375	-763.538
16	-80	-135	-313	406	0.688	-8.988	66.100	-751.325
16.5	80	-270	-163	246	4.375	-5.113	65.413	-742.338
17	292	-471	-71	174	9.538	-3.063	61.038	-737.225
17.5	258	-447	-134	257	8.813	-4.888	51.500	-734.163
18	189	-364	-310	370	6.913	-8.500	42.688	-729.275
18.5	111	-306	-426	524	5.213	-11.875	35.775	-720.775
19	-6	-167	-546	657	2.013	-15.038	30.563	-708.900
19.5	-203	10	-740	862	-2.663	-20.025	28.550	-693.863
20	-279	86	-805	912	-4.563	-21.463	31.213	-673.838
20.5	-352	176	-757	835	-6.600	-19.900	35.775	-652.375
21	-471	275	-744	813	-9.325	-19.463	42.375	-632.475
21.5	-662	476	-681	778	-14.225	-18.238	51.700	-613.013
22	-808	619	-624	733	-17.838	-16.963	65.925	-594.775
22.5	-674	486	-582	674	-14.500	-15.700	83.763	-577.813
23	-388	194	-359	464	-7.275	-10.288	98.263	-562.113
23.5	-396	218	-450	541	-7.675	-12.388	105.538	-551.825
24	-369	162	-605	707	-6.638	-16.400	113.213	-539.438
24.5	-357	183	-879	971	-6.750	-23.125	119.850	-523.038
25	-478	276	-1173	1292	-9.425	-30.813	126.600	-499.913
25.5	-538	321	-1551	1641	-10.738	-39.900	136.025	-469.100
26	-304	114	-1191	1292	-5.225	-31.038	146.763	-429.200
26.5	-238	44	-857	951	-3.525	-22.600	151.988	-398.163
27	-146	-83	-454	556	-0.788	-12.625	155.513	-375.563
27.5	17	-214	-98	193	2.888	-3.638	156.300	-362.938
28	261	-455	313	-241	8.950	6.925	153.413	-359.300
28.5	529	-725	755	-696	15.675	18.138	144.463	-366.225
29	648	-840	1058	-937	18.600	24.938	128.788	-384.363
29.5	594	-794	686	-575	17.350	15.763	110.188	-409.300
30	465	-661	263	-144	14.075	5.088	92.838	-425.063
30.5	349	-537	-222	349	11.075	-7.138	78.763	-430.150
31	66	-254	-762	886	4.000	-20.600	67.688	-423.013
31.5	36	-232	-1369	1477	3.350	-35.575	63.688	-402.413
32	345	-518	-1650	1761	10.788	-42.638	60.338	-366.838
32.5	287	-472	-1692	1804	9.488	-43.700	49.550	-324.200
33	214	-392	-1685	1792	7.575	-43.463	40.063	-280.500
33.5	126	-301	-1706	1822	5.338	-44.100	32.488	-237.038
34	1	-177	-1786	1918	2.225	-46.300	27.150	-192.938
34.5	106	-299	-1984	2068	5.063	-50.650	24.925	-146.638
35	142	-356	-1571	1664	6.225	-40.438	19.863	-95.988
35.5	78	-270	-875	961	4.350	-22.950	13.638	-55.550
36	-3	-196	-868	968	2.413	-22.950	9.288	-32.600
36.5	-24	-173	-469	568	1.863	-12.963	6.875	-9.650
37	99	-302	186	-79	5.013	3.313	5.013	3.313
Reference Point							0.000	0.000

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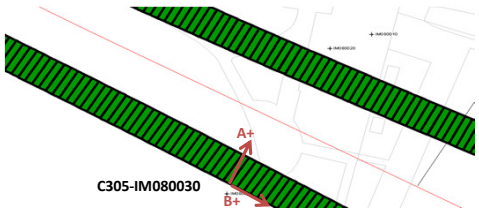
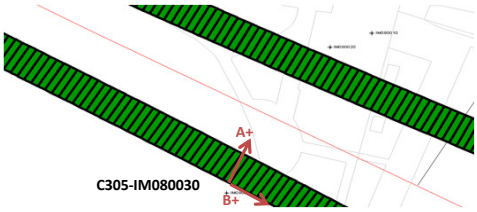


Serial number probe: DI1244

29-8-13 15:00

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	30	-155	706	-571	2.313	15.963	-59.875	-1251.150
1	196	-302	565	-431	6.225	12.450	-62.188	-1267.113
1.5	212	-330	295	-152	6.775	5.588	-68.413	-1279.563
2	416	-529	255	-122	11.813	4.713	-75.188	-1285.150
2.5	483	-607	53	119	13.625	-0.825	-87.000	-1289.863
3	310	-421	-261	422	9.138	-8.538	-100.625	-1289.038
3.5	156	-263	-747	927	5.238	-20.925	-109.763	-1280.500
4	132	-257	-973	1112	4.863	-26.063	-115.000	-1259.575
4.5	131	-248	-874	1029	4.738	-23.788	-119.863	-1233.513
5	207	-329	-708	833	6.700	-19.263	-124.600	-1209.725
5.5	194	-310	-713	850	6.300	-19.538	-131.300	-1190.463
6	152	-265	-746	894	5.213	-20.500	-137.600	-1170.925
6.5	110	-222	-748	895	4.150	-20.538	-142.813	-1150.425
7	37	-162	-760	909	2.488	-20.863	-146.963	-1129.888
7.5	123	-228	-741	912	4.388	-20.663	-149.450	-1109.025
8	288	-412	-773	913	8.750	-21.075	-153.838	-1088.363
8.5	8	-134	-759	903	1.775	-20.775	-162.588	-1067.288
9	-343	239	-774	923	-7.275	-21.213	-164.363	-1046.513
9.5	-646	532	-799	940	-14.725	-21.738	-157.088	-1025.300
10	-846	727	-782	922	-19.663	-21.300	-142.363	-1003.563
10.5	-1003	882	-788	948	-23.563	-21.700	-122.700	-982.263
11	-973	868	-759	907	-23.013	-20.825	-99.138	-960.563
11.5	-962	849	-834	982	-22.638	-22.700	-76.125	-939.738
12	-977	860	-896	1042	-22.963	-24.225	-53.488	-917.038
12.5	-992	887	-943	1082	-23.488	-25.313	-30.525	-892.813
13	-999	891	-995	1140	-23.625	-26.688	-7.038	-867.500
13.5	-889	777	-979	1142	-20.825	-26.513	16.588	-840.813
14	-584	452	-761	928	-12.950	-21.113	37.413	-814.300
14.5	-440	320	-596	752	-9.500	-16.850	50.363	-793.188
15	-282	182	-470	625	-5.800	-13.688	59.863	-776.338
15.5	-170	47	-401	567	-2.713	-12.100	65.663	-762.650
16	-45	-104	-284	429	0.738	-8.913	68.375	-750.550
16.5	115	-234	-137	269	4.363	-5.075	67.638	-741.638
17	335	-435	-51	196	9.625	-3.088	63.275	-736.563
17.5	295	-409	-107	279	8.800	-4.825	53.650	-733.475
18	224	-331	-280	395	6.938	-8.438	44.850	-728.650
18.5	147	-268	-396	545	5.188	-11.763	37.913	-720.213
19	34	-131	-526	675	2.063	-15.013	32.725	-708.450
19.5	-159	47	-714	884	-2.575	-19.975	30.663	-693.438
20	-240	122	-781	932	-4.525	-21.413	33.238	-673.463
20.5	-317	206	-736	863	-6.538	-19.988	37.763	-652.050
21	-430	305	-717	838	-9.188	-19.438	44.300	-632.063
21.5	-620	513	-657	803	-14.163	-18.250	53.488	-612.625
22	-768	657	-602	753	-17.813	-16.938	67.650	-594.375
22.5	-639	520	-552	697	-14.488	-15.613	85.463	-577.438
23	-349	233	-338	483	-7.275	-10.263	99.950	-561.825
23.5	-355	252	-430	568	-7.588	-12.475	107.225	-551.563
24	-328	201	-584	728	-6.613	-16.400	114.813	-539.088
24.5	-316	222	-851	993	-6.725	-23.050	121.425	-522.688
25	-438	316	-1152	1313	-9.425	-30.813	128.150	-499.638
25.5	-494	357	-1531	1664	-10.638	-39.938	137.575	-468.825
26	-261	153	-1164	1320	-5.175	-31.050	148.213	-428.888
26.5	-200	81	-835	974	-3.513	-22.613	153.388	-397.838
27	-110	-43	-432	575	-0.838	-12.588	156.900	-375.225
27.5	61	-184	-78	216	3.063	-3.675	157.738	-362.638
28	305	-416	337	-216	9.013	6.913	154.675	-358.963
28.5	565	-694	784	-671	15.738	18.188	145.663	-365.875
29	692	-808	1081	-919	18.750	25.000	129.925	-384.063
29.5	638	-754	706	-547	17.400	15.663	111.175	-409.063
30	509	-628	287	-126	14.213	5.163	93.775	-424.725
30.5	392	-506	-200	373	11.225	-7.163	79.563	-429.888
31	107	-223	-735	904	4.125	-20.488	68.338	-422.725
31.5	74	-194	-1341	1503	3.350	-35.550	64.213	-402.238
32	383	-482	-1620	1779	10.813	-42.488	60.863	-366.688
32.5	328	-441	-1672	1828	9.613	-43.750	50.050	-324.200
33	251	-359	-1665	1811	7.625	-43.450	40.438	-280.450
33.5	160	-264	-1682	1844	5.300	-44.075	32.813	-237.000
34	35	-145	-1763	1946	2.250	-46.363	27.513	-192.925
34.5	143	-269	-1954	2090	5.150	-50.550	25.263	-146.563
35	176	-317	-1551	1686	6.163	-40.463	20.113	-96.013
35.5	119	-236	-850	981	4.438	-22.888	13.950	-55.550
36	38	-162	-845	996	2.500	-23.013	9.513	-32.663
36.5	20	-140	-446	587	2.000	-12.913	7.013	-9.650
37	136	-265	206	-55	5.013	3.263	5.013	3.263
Reference Point							0.000	0.000

C305-IM080030



Serial number probe: 1035333

28-8-13 10:19

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	-11	-190	675	-587	2.238	15.775	-63.138	-1257.613
1	159	-335	538	-452	6.175	12.375	-65.375	-1273.388
1.5	181	-363	289	-179	6.800	5.850	-71.550	-1285.763
2	380	-566	236	-142	11.825	4.725	-78.350	-1291.613
2.5	447	-642	32	102	13.613	-0.875	-90.175	-1296.338
3	279	-455	-289	405	9.175	-8.675	-103.788	-1295.463
3.5	118	-294	-763	907	5.150	-20.875	-112.963	-1286.788
4	98	-287	-979	1085	4.813	-25.800	-118.113	-1265.913
4.5	106	-281	-911	1005	4.838	-23.950	-122.925	-1240.113
5	173	-361	-715	818	6.675	-19.163	-127.763	-1216.163
5.5	156	-340	-725	836	6.200	-19.513	-134.438	-1197.000
6	119	-287	-777	865	5.075	-20.525	-140.638	-1177.488
6.5	71	-248	-786	872	3.988	-20.725	-145.713	-1156.963
7	6	-193	-778	874	2.488	-20.650	-149.700	-1136.238
7.5	86	-261	-767	892	4.338	-20.738	-152.188	-1115.588
8	258	-443	-806	888	8.763	-21.175	-156.525	-1094.850
8.5	-17	-167	-787	876	1.875	-20.788	-165.288	-1073.675
9	-382	214	-811	907	-7.450	-21.475	-167.163	-1052.888
9.5	-681	499	-828	923	-14.750	-21.888	-159.713	-1031.413
10	-889	696	-808	897	-19.813	-21.313	-144.963	-1009.525
10.5	-1032	856	-811	930	-23.600	-21.763	-125.150	-988.213
11	-1007	833	-787	880	-23.000	-20.838	-101.550	-966.450
11.5	-994	813	-863	953	-22.588	-22.700	-78.550	-945.613
12	-1012	827	-929	1021	-22.988	-24.375	-55.963	-922.913
12.5	-1029	860	-970	1056	-23.613	-25.325	-32.975	-898.538
13	-1037	864	-1020	1120	-23.763	-26.750	-9.363	-873.213
13.5	-926	743	-1006	1133	-20.863	-26.738	14.400	-846.463
14	-617	426	-801	895	-13.038	-21.200	35.263	-819.725
14.5	-472	295	-633	732	-9.588	-17.063	48.300	-798.525
15	-314	153	-499	607	-5.838	-13.825	57.888	-781.463
15.5	-202	17	-454	540	-2.738	-12.425	63.725	-767.638
16	-76	-134	-311	406	0.725	-8.963	66.463	-755.213
16.5	79	-269	-160	250	4.350	-5.125	65.738	-746.250
17	299	-469	-82	190	9.600	-3.400	61.388	-741.125
17.5	262	-440	-155	248	8.775	-5.038	51.788	-737.725
18	185	-367	-309	383	6.900	-8.650	43.013	-732.688
18.5	109	-300	-436	523	5.113	-11.988	36.113	-724.038
19	-1	-165	-552	657	2.050	-15.113	31.000	-712.050
19.5	-199	23	-740	861	-2.775	-20.013	28.950	-696.938
20	-277	93	-802	905	-4.625	-21.338	31.725	-676.925
20.5	-352	176	-777	859	-6.600	-20.450	36.350	-655.588
21	-464	273	-736	834	-9.213	-19.625	42.950	-635.138
21.5	-651	476	-687	772	-14.088	-18.238	52.163	-615.513
22	-800	623	-627	730	-17.788	-16.963	66.250	-597.275
22.5	-673	487	-589	678	-14.500	-15.838	84.038	-580.313
23	-385	198	-372	465	-7.288	-10.463	98.538	-564.475
23.5	-387	221	-452	549	-7.600	-12.513	105.825	-554.013
24	-362	172	-607	707	-6.675	-16.425	113.425	-541.500
24.5	-353	188	-876	970	-6.763	-23.075	120.100	-525.075
25	-470	283	-1180	1278	-9.413	-30.725	126.863	-502.000
25.5	-525	323	-1558	1648	-10.600	-40.075	136.275	-471.275
26	-298	124	-1188	1293	-5.275	-31.013	146.875	-431.200
26.5	-233	54	-849	957	-3.588	-22.575	152.150	-400.188
27	-134	-72	-457	569	-0.775	-12.825	155.738	-377.613
27.5	38	-215	-80	196	3.163	-3.450	156.513	-364.788
28	270	-448	351	-221	8.975	7.150	153.350	-361.338
28.5	537	-716	758	-679	15.663	17.963	144.375	-368.488
29	662	-838	1056	-944	18.750	25.000	128.713	-386.450
29.5	598	-785	680	-570	17.288	15.625	109.963	-411.450
30	478	-658	264	-154	14.200	5.225	92.675	-427.075
30.5	358	-530	-224	348	11.100	-7.150	78.475	-432.300
31	75	-252	-780	881	4.088	-20.763	67.375	-425.150
31.5	44	-218	-1379	1481	3.275	-35.750	63.288	-404.388
32	342	-507	-1667	1761	10.613	-42.850	60.013	-368.638
32.5	285	-463	-1718	1813	9.350	-44.138	49.400	-325.788
33	218	-385	-1699	1800	7.538	-43.738	40.050	-281.650
33.5	114	-289	-1733	1822	5.038	-44.438	32.513	-237.913
34	-9	-173	-1806	1925	2.050	-46.638	27.475	-193.475
34.5	112	-298	-1975	2084	5.125	-50.738	25.425	-146.838
35	147	-343	-1575	1671	6.125	-40.575	20.300	-96.100
35.5	88	-263	-871	969	4.388	-23.000	14.175	-55.525
36	14	-194	-859	973	2.600	-22.900	9.788	-32.525
36.5	-7	-171	-470	576	2.050	-13.075	7.188	-9.625
37	115	-296	203	-73	5.138	3.450	5.138	3.450
Reference Point							0.000	0.000

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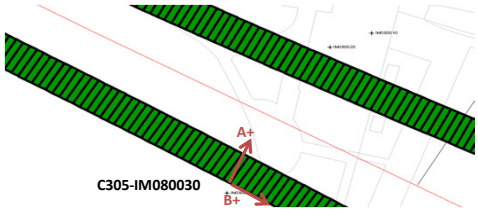
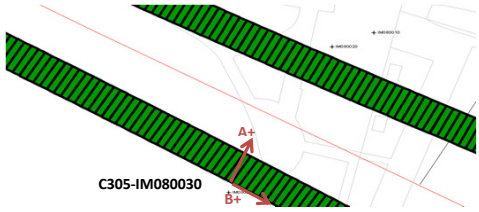


Serial number probe: DI1244

29-8-13 16:00

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	32	-152	698	-567	2.300	15.813	-60.375	-1255.263
1	197	-298	566	-433	6.188	12.488	-62.675	-1271.075
1.5	219	-324	313	-156	6.788	5.863	-68.863	-1283.563
2	421	-527	261	-119	11.850	4.750	-75.650	-1289.425
2.5	489	-603	54	129	13.650	-0.938	-87.500	-1294.175
3	315	-419	-263	425	9.175	-8.600	-101.150	-1293.238
3.5	159	-259	-742	931	5.225	-20.913	-110.325	-1284.638
4	139	-253	-956	1112	4.900	-25.850	-115.550	-1263.725
4.5	143	-246	-883	1032	4.863	-23.938	-120.450	-1237.875
5	213	-325	-694	843	6.725	-19.213	-125.313	-1213.938
5.5	198	-304	-702	855	6.275	-19.463	-132.038	-1194.725
6	155	-255	-752	884	5.125	-20.450	-138.313	-1175.263
6.5	112	-217	-758	891	4.113	-20.613	-143.438	-1154.813
7	42	-156	-756	900	2.475	-20.700	-147.550	-1134.200
7.5	128	-223	-745	912	4.388	-20.713	-150.025	-1113.500
8	293	-408	-779	915	8.763	-21.175	-154.413	-1092.788
8.5	18	-131	-759	901	1.863	-20.750	-163.175	-1071.613
9	-343	246	-785	927	-7.363	-21.400	-165.038	-1050.863
9.5	-644	531	-801	948	-14.688	-21.863	-157.675	-1029.463
10	-848	731	-782	918	-19.738	-21.250	-142.988	-1007.600
10.5	-997	889	-790	954	-23.575	-21.800	-123.250	-986.350
11	-970	870	-765	901	-23.000	-20.825	-99.675	-964.550
11.5	-958	851	-836	979	-22.613	-22.688	-76.675	-943.725
12	-976	864	-907	1047	-23.000	-24.425	-54.062	-921.038
12.5	-987	893	-942	1082	-23.500	-25.300	-31.062	-896.613
13	-998	897	-999	1141	-23.688	-26.750	-7.562	-871.313
13.5	-890	775	-979	1159	-20.813	-26.725	16.125	-844.563
14	-582	461	-775	917	-13.038	-21.150	36.938	-817.838
14.5	-437	326	-611	751	-9.538	-17.025	49.975	-796.688
15	-278	187	-474	626	-5.813	-13.750	59.513	-779.663
15.5	-164	52	-425	566	-2.700	-12.388	65.325	-765.913
16	-41	-99	-284	431	0.725	-8.938	68.025	-753.525
16.5	118	-231	-138	275	4.363	-5.163	67.300	-744.588
17	334	-435	-55	210	9.613	-3.313	62.938	-739.425
17.5	299	-409	-127	273	8.850	-5.000	53.325	-736.113
18	225	-328	-282	403	6.913	-8.563	44.475	-731.113
18.5	150	-266	-414	549	5.200	-12.038	37.563	-722.550
19	34	-128	-527	679	2.025	-15.075	32.363	-710.513
19.5	-159	55	-711	885	-2.675	-19.950	30.338	-695.438
20	-237	127	-779	931	-4.550	-21.375	33.013	-675.488
20.5	-314	209	-748	883	-6.538	-20.388	37.563	-654.113
21	-426	309	-707	859	-9.188	-19.575	44.100	-633.725
21.5	-616	511	-660	799	-14.088	-18.238	53.288	-614.150
22	-764	658	-602	751	-17.775	-16.913	67.375	-595.913
22.5	-634	524	-565	699	-14.475	-15.800	85.150	-579.000
23	-346	237	-344	486	-7.288	-10.375	99.625	-563.200
23.5	-350	254	-430	576	-7.550	-12.575	106.913	-552.825
24	-324	206	-583	730	-6.625	-16.413	114.463	-540.250
24.5	-310	224	-849	991	-6.675	-23.000	121.088	-523.838
25	-431	322	-1151	1298	-9.413	-30.613	127.763	-500.838
25.5	-484	362	-1532	1667	-10.575	-39.988	137.175	-470.225
26	-261	159	-1160	1316	-5.250	-30.950	147.750	-430.238
26.5	-195	86	-823	978	-3.513	-22.513	153.000	-399.288
27	-99	-34	-428	590	-0.813	-12.725	156.513	-376.775
27.5	73	-176	-54	220	3.113	-3.425	157.325	-364.050
28	311	-411	373	-199	9.025	7.150	154.213	-360.625
28.5	576	-683	787	-659	15.738	18.075	145.188	-367.775
29	699	-806	1085	-920	18.813	25.063	129.450	-385.850
29.5	641	-749	703	-548	17.375	15.638	110.638	-410.913
30	517	-623	290	-129	14.250	5.238	93.263	-426.550
30.5	395	-499	-202	368	11.175	-7.125	79.013	-431.788
31	116	-218	-755	908	4.175	-20.788	67.838	-424.663
31.5	81	-184	-1353	1503	3.313	-35.700	63.663	-403.875
32	379	-471	-1642	1787	10.625	-42.863	60.350	-368.175
32.5	322	-427	-1694	1835	9.363	-44.113	49.725	-325.313
33	255	-354	-1670	1820	7.613	-43.625	40.363	-281.200
33.5	156	-256	-1704	1848	5.150	-44.400	32.750	-237.575
34	28	-134	-1785	1944	2.025	-46.613	27.600	-193.175
34.5	155	-266	-1952	2105	5.263	-50.713	25.575	-146.563
35	184	-306	-1549	1693	6.125	-40.525	20.313	-95.850
35.5	125	-228	-843	991	4.413	-22.925	14.188	-55.325
36	49	-160	-835	992	2.613	-22.838	9.775	-32.400
36.5	32	-132	-442	603	2.050	-13.063	7.163	-9.563
37	150	-259	230	-50	5.113	3.500	5.113	3.500
Reference Point							0.000	0.000

C305-IM080030

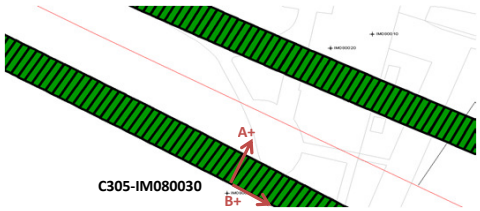


Serial number probe: 1035333

28-8-13 11:21

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	-11	-193	676	-582	2.275	15.725	-60.563	-1252.613
1	158	-329	556	-467	6.088	12.788	-62.838	-1268.338
1.5	174	-365	272	-172	6.738	5.550	-68.925	-1281.125
2	387	-569	238	-122	11.950	4.500	-75.663	-1286.675
2.5	447	-636	46	95	13.538	-0.613	-87.613	-1291.175
3	271	-454	-289	396	9.063	-8.563	-101.150	-1290.563
3.5	119	-304	-774	907	5.288	-21.013	-110.213	-1282.000
4	102	-299	-975	1090	5.013	-25.813	-115.500	-1260.988
4.5	106	-287	-893	1007	4.913	-23.750	-120.513	-1235.175
5	175	-369	-707	798	6.800	-18.813	-125.425	-1211.425
5.5	162	-342	-745	824	6.300	-19.613	-132.225	-1192.613
6	109	-297	-766	867	5.075	-20.413	-138.525	-1173.000
6.5	72	-255	-780	859	4.088	-20.488	-143.600	-1152.588
7	0	-199	-789	873	2.488	-20.775	-147.688	-1132.100
7.5	94	-263	-769	889	4.463	-20.725	-150.175	-1111.325
8	257	-442	-802	889	8.738	-21.138	-154.638	-1090.600
8.5	-28	-164	-786	868	1.700	-20.675	-163.375	-1069.463
9	-382	208	-808	899	-7.375	-21.338	-165.075	-1048.788
9.5	-692	492	-819	912	-14.800	-21.638	-157.700	-1027.450
10	-890	694	-798	887	-19.800	-21.063	-142.900	-1005.813
10.5	-1041	855	-816	924	-23.700	-21.750	-123.100	-984.750
11	-1012	833	-785	879	-23.063	-20.800	-99.400	-963.000
11.5	-998	806	-868	968	-22.550	-22.950	-76.338	-942.200
12	-1020	832	-946	1024	-23.150	-24.625	-53.788	-919.250
12.5	-1026	855	-958	1061	-23.513	-25.238	-30.638	-894.625
13	-1035	857	-1015	1110	-23.650	-26.563	-7.125	-869.388
13.5	-923	732	-1003	1132	-20.688	-26.688	16.525	-842.825
14	-613	416	-793	885	-12.863	-20.975	37.213	-816.138
14.5	-471	291	-624	732	-9.525	-16.950	50.075	-795.163
15	-313	148	-490	605	-5.763	-13.688	59.600	-778.213
15.5	-208	8	-438	533	-2.700	-12.138	65.363	-764.525
16	-74	-142	-314	412	0.850	-9.075	68.063	-752.388
16.5	78	-277	-163	251	4.438	-5.175	67.213	-743.313
17	297	-474	-71	174	9.638	-3.063	62.775	-738.138
17.5	263	-440	-149	260	8.788	-5.113	53.138	-735.075
18	179	-366	-308	370	6.813	-8.475	44.350	-729.963
18.5	111	-303	-438	513	5.175	-11.888	37.538	-721.488
19	-9	-165	-565	650	1.950	-15.188	32.363	-709.600
19.5	-195	18	-735	856	-2.663	-19.888	30.413	-694.413
20	-275	81	-810	908	-4.450	-21.475	33.075	-674.525
20.5	-357	172	-768	848	-6.613	-20.200	37.525	-653.050
21	-468	267	-746	817	-9.188	-19.538	44.138	-632.850
21.5	-665	478	-686	767	-14.288	-18.163	53.325	-613.313
22	-807	617	-634	718	-17.800	-16.900	67.613	-595.150
22.5	-669	488	-591	668	-14.463	-15.738	85.413	-578.250
23	-387	192	-366	460	-7.238	-10.325	99.875	-562.513
23.5	-391	217	-452	544	-7.600	-12.450	107.113	-552.188
24	-359	162	-605	697	-6.513	-16.275	114.713	-539.738
24.5	-346	181	-873	968	-6.588	-23.013	121.225	-523.463
25	-473	289	-1170	1275	-9.525	-30.563	127.813	-500.450
25.5	-526	320	-1558	1641	-10.575	-39.988	137.338	-469.888
26	-296	108	-1186	1290	-5.050	-30.950	147.913	-429.900
26.5	-234	48	-846	954	-3.525	-22.500	152.963	-398.950
27	-137	-71	-457	562	-0.825	-12.738	156.488	-376.450
27.5	27	-220	-37	199	3.088	-2.950	157.313	-363.713
28	265	-450	327	-233	8.938	7.000	154.225	-360.763
28.5	542	-729	771	-693	15.888	18.300	145.288	-367.763
29	659	-846	1058	-944	18.813	25.025	129.400	-386.063
29.5	597	-785	679	-563	17.275	15.525	110.588	-411.088
30	472	-662	260	-138	14.175	4.975	93.313	-426.613
30.5	363	-541	-223	345	11.300	-7.100	79.138	-431.588
31	70	-253	-764	888	4.038	-20.650	67.838	-424.488
31.5	38	-232	-1383	1481	3.375	-35.800	63.800	-403.838
32	336	-521	-1673	1764	10.713	-42.963	60.425	-368.038
32.5	284	-472	-1720	1805	9.450	-44.063	49.713	-325.075
33	215	-394	-1687	1794	7.613	-43.513	40.263	-281.013
33.5	121	-301	-1719	1824	5.275	-44.288	32.650	-237.500
34	-11	-170	-1814	1915	1.988	-46.613	27.375	-193.213
34.5	108	-307	-1973	2081	5.188	-50.675	25.388	-146.600
35	138	-348	-1569	1665	6.075	-40.425	20.200	-95.925
35.5	88	-266	-865	970	4.425	-22.938	14.125	-55.500
36	3	-194	-862	967	2.463	-22.863	9.700	-32.563
36.5	-9	-170	-467	569	2.013	-12.950	7.238	-9.700
37	111	-307	176	-84	5.225	3.250	5.225	3.250
Reference Point							0.000	0.000

C305-IM080030



Serial number probe: DI1244

29-8-13 17:00

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	33	-155	697	-559	2.350	15.700	-57.575	-1250.625
1	194	-300	580	-440	6.175	12.750	-59.925	-1266.325
1.5	219	-328	300	-148	6.838	5.600	-66.100	-1279.075
2	420	-531	266	-105	11.888	4.638	-72.938	-1284.675
2.5	487	-605	66	119	13.650	-0.663	-84.825	-1289.313
3	314	-421	-259	418	9.188	-8.463	-98.475	-1288.650
3.5	158	-264	-748	927	5.275	-20.938	-107.663	-1280.188
4	137	-262	-952	1111	4.988	-25.788	-112.938	-1259.250
4.5	146	-249	-871	1035	4.938	-23.825	-117.925	-1233.463
5	213	-330	-683	825	6.788	-18.850	-122.863	-1209.638
5.5	197	-311	-719	842	6.350	-19.513	-129.650	-1190.788
6	150	-260	-747	887	5.125	-20.425	-136.000	-1171.275
6.5	111	-222	-757	885	4.163	-20.525	-141.125	-1150.850
7	42	-161	-763	895	2.538	-20.725	-145.288	-1130.325
7.5	127	-230	-747	906	4.463	-20.663	-147.825	-1109.600
8	290	-410	-781	910	8.750	-21.138	-152.288	-1088.938
8.5	14	-129	-765	892	1.788	-20.713	-161.038	-1067.800
9	-343	242	-780	920	-7.313	-21.250	-162.825	-1047.088
9.5	-647	531	-792	935	-14.725	-21.588	-155.513	-1025.838
10	-849	728	-778	905	-19.713	-21.038	-140.788	-1004.250
10.5	-1003	887	-788	944	-23.625	-21.650	-121.075	-983.213
11	-971	866	-759	901	-22.963	-20.750	-97.450	-961.563
11.5	-961	846	-837	989	-22.588	-22.825	-74.488	-940.813
12	-980	861	-915	1041	-23.013	-24.450	-51.900	-917.988
12.5	-991	885	-936	1085	-23.450	-25.263	-28.888	-893.538
13	-998	894	-996	1138	-23.650	-26.675	-5.438	-868.275
13.5	-888	771	-982	1153	-20.738	-26.688	18.213	-841.600
14	-579	456	-772	907	-12.938	-20.988	38.950	-814.913
14.5	-438	321	-605	749	-9.488	-16.925	51.888	-793.925
15	-280	181	-470	630	-5.763	-13.750	61.375	-777.000
15.5	-166	47	-410	560	-2.663	-12.125	67.138	-763.250
16	-40	-102	-288	432	0.775	-9.000	69.800	-751.125
16.5	120	-238	-133	276	4.475	-5.113	69.025	-742.125
17	336	-438	-50	193	9.675	-3.038	64.550	-737.013
17.5	298	-407	-128	279	8.813	-5.088	54.875	-733.975
18	221	-334	-287	394	6.938	-8.513	46.063	-728.888
18.5	149	-270	-411	540	5.238	-11.888	39.125	-720.375
19	34	-132	-534	676	2.075	-15.125	33.888	-708.488
19.5	-157	53	-712	883	-2.625	-19.938	31.813	-693.363
20	-239	120	-786	925	-4.488	-21.388	34.438	-673.425
20.5	-318	205	-741	866	-6.538	-20.088	38.925	-652.038
21	-429	307	-716	838	-9.200	-19.425	45.463	-631.950
21.5	-621	512	-660	793	-14.163	-18.163	54.663	-612.525
22	-769	651	-615	746	-17.750	-17.013	68.825	-594.363
22.5	-633	517	-566	692	-14.375	-15.725	86.575	-577.350
23	-348	231	-342	482	-7.238	-10.300	100.950	-561.625
23.5	-350	251	-422	565	-7.513	-12.338	108.188	-551.325
24	-323	198	-584	725	-6.513	-16.363	115.700	-538.988
24.5	-310	222	-851	987	-6.650	-22.975	122.213	-522.625
25	-432	319	-1144	1297	-9.388	-30.513	128.863	-499.650
25.5	-483	361	-1528	1662	-10.550	-39.875	138.250	-469.138
26	-262	149	-1165	1312	-5.138	-30.963	148.800	-429.263
26.5	-195	83	-823	973	-3.475	-22.450	153.938	-398.300
27	-101	-42	-431	582	-0.738	-12.663	157.413	-375.850
27.5	72	-179	-9	216	3.138	-2.813	158.150	-363.188
28	310	-414	353	-205	9.050	6.975	155.013	-360.375
28.5	575	-691	794	-670	15.825	18.300	145.963	-367.350
29	700	-806	1082	-919	18.825	25.013	130.138	-385.650
29.5	640	-755	702	-538	17.438	15.500	111.313	-410.663
30	516	-626	288	-120	14.275	5.100	93.875	-426.163
30.5	397	-503	-199	370	11.250	-7.113	79.600	-431.263
31	113	-219	-741	910	4.150	-20.638	68.350	-424.150
31.5	79	-194	-1353	1506	3.413	-35.738	64.200	-403.513
32	375	-481	-1645	1782	10.700	-42.838	60.788	-367.775
32.5	321	-437	-1689	1828	9.475	-43.963	50.088	-324.938
33	255	-355	-1665	1816	7.625	-43.513	40.613	-280.975
33.5	155	-260	-1700	1845	5.188	-44.313	32.988	-237.463
34	27	-138	-1792	1942	2.063	-46.675	27.800	-193.150
34.5	152	-274	-1949	2098	5.325	-50.588	25.738	-146.475
35	181	-312	-1545	1685	6.163	-40.375	20.413	-95.888
35.5	124	-233	-844	988	4.463	-22.900	14.250	-55.513
36	47	-157	-838	994	2.550	-22.900	9.788	-32.613
36.5	31	-137	-448	591	2.100	-12.988	7.238	-9.713
37	145	-266	201	-61	5.138	3.275	5.138	3.275
Reference Point							0.000	0.000

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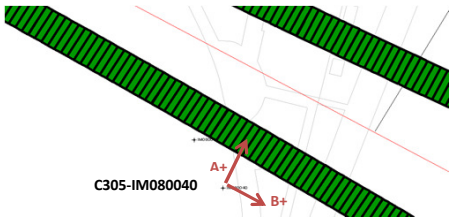
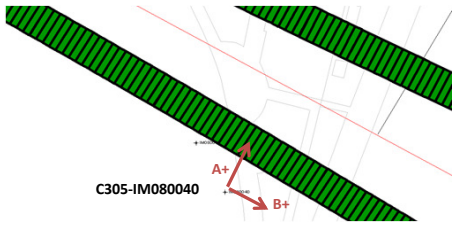


Serial number probe: 1035333

26-8-13 10:58

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	-183	-13	-715	850	-2.125	-19.563	989.200	976.013
1	-90	-109	-278	432	0.238	-8.875	991.325	995.575
1.5	21	-208	-270	398	2.863	-8.350	991.088	1004.450
2	213	-388	-251	367	7.513	-7.725	988.225	1012.800
2.5	371	-542	-199	312	11.413	-6.388	980.713	1020.525
3	466	-649	-78	219	13.938	-3.713	969.300	1026.913
3.5	458	-644	-81	188	13.775	-3.363	955.363	1030.625
4	270	-453	229	-101	9.038	4.125	941.588	1033.988
4.5	303	-495	318	-198	9.975	6.450	932.550	1029.863
5	467	-625	365	-257	13.650	7.775	922.575	1023.413
5.5	622	-820	527	-413	18.025	11.750	908.925	1015.638
6	724	-893	656	-523	20.213	14.738	890.900	1003.888
6.5	724	-890	686	-576	20.175	15.775	870.688	989.150
7	681	-873	580	-461	19.425	13.013	850.513	973.375
7.5	581	-773	352	-251	16.925	7.538	831.088	960.363
8	556	-725	274	-159	16.013	5.413	814.163	952.825
8.5	516	-714	251	-123	15.375	4.675	798.150	947.413
9	531	-703	250	-140	15.425	4.875	782.775	942.738
9.5	527	-705	227	-100	15.400	4.088	767.350	937.863
10	407	-587	272	-156	12.425	5.350	751.950	933.775
10.5	377	-579	357	-212	11.950	7.113	739.525	928.425
11	369	-538	455	-306	11.338	9.513	727.575	921.313
11.5	323	-512	479	-348	10.438	10.338	716.238	911.800
12	261	-449	520	-406	8.875	11.575	705.800	901.463
12.5	195	-369	552	-409	7.050	12.013	696.925	889.888
13	339	-535	800	-655	10.925	18.188	689.875	877.875
13.5	353	-521	729	-606	10.925	16.688	678.950	859.688
14	318	-504	670	-542	10.275	15.150	668.025	843.000
14.5	281	-461	689	-568	9.275	15.713	657.750	827.850
15	261	-440	731	-582	8.763	16.413	648.475	812.138
15.5	304	-476	774	-632	9.750	17.575	639.713	795.725
16	205	-390	890	-770	7.438	20.750	629.963	778.150
16.5	177	-349	912	-779	6.575	21.138	622.525	757.400
17	230	-410	890	-766	8.000	20.700	615.950	736.263
17.5	305	-486	921	-774	9.888	21.188	607.950	715.563
18	345	-511	911	-772	10.700	21.038	598.063	694.375
18.5	299	-473	890	-749	9.650	20.488	587.363	673.338
19	157	-326	854	-722	6.038	19.700	577.713	652.850
19.5	160	-342	828	-690	6.275	18.975	571.675	633.150
20	171	-362	805	-666	6.663	18.388	565.400	614.175
20.5	192	-384	779	-674	7.200	18.163	558.738	595.788
21	207	-383	775	-630	7.375	17.563	551.538	577.625
21.5	177	-363	755	-619	6.750	17.175	544.163	560.063
22	202	-390	775	-640	7.400	17.688	537.413	542.888
22.5	192	-367	755	-627	6.988	17.275	530.013	525.200
23	259	-415	737	-610	8.425	16.838	523.025	507.925
23.5	394	-568	715	-580	12.025	16.188	514.600	491.088
24	559	-738	683	-568	16.213	15.638	502.575	474.900
24.5	687	-853	539	-407	19.250	11.825	486.363	459.263
25	835	-990	594	-435	22.813	12.863	467.113	447.438
25.5	703	-892	650	-503	19.938	14.413	444.300	434.575
26	671	-864	706	-547	19.188	15.663	424.363	420.163
26.5	693	-876	762	-609	19.613	17.138	405.175	404.500
27	710	-894	812	-678	20.050	18.625	385.563	387.363
27.5	689	-878	816	-691	19.588	18.838	365.513	368.738
28	484	-681	919	-771	14.563	21.125	345.925	349.900
28.5	454	-633	837	-705	13.588	19.275	331.363	328.775
29	503	-690	758	-622	14.913	17.250	317.775	309.500
29.5	567	-765	735	-584	16.650	16.488	302.863	292.250
30	667	-853	758	-585	19.000	16.788	286.213	275.763
30.5	797	-975	804	-652	22.150	18.200	267.213	258.975
31	809	-993	872	-730	22.525	20.025	245.063	240.775
31.5	826	-1009	929	-778	22.938	21.338	222.538	220.750
32	686	-860	857	-713	19.325	19.625	199.600	199.413
32.5	613	-800	879	-721	17.663	20.000	180.275	179.788
33	618	-806	975	-845	17.800	22.750	162.613	159.788
33.5	645	-819	1104	-986	18.300	26.125	144.813	137.038
34	799	-983	1411	-1256	22.275	33.338	126.513	110.913
34.5	864	-1041	1345	-1208	23.813	31.913	104.238	77.575
35	708	-895	1069	-940	20.038	25.113	80.425	45.663
35.5	693	-879	810	-663	19.650	18.413	60.388	20.550
36	718	-886	287	-151	20.050	5.475	40.738	2.138
36.5	744	-911	-64	203	20.688	-3.338	20.688	-3.338
Reference Point							0.000	0.000

C305-IM080040

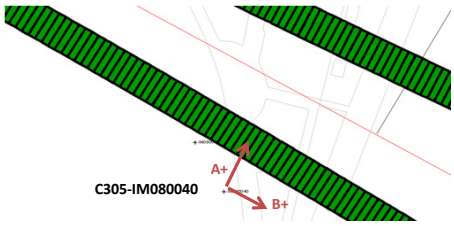


Serial number probe: DI1244

27-8-13 12:26

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	-146	18	-689	877	-2.050	-19.575	994.188	977.850
1	-46	-74	-255	454	0.350	-8.863	996.238	997.425
1.5	65	-178	-240	420	3.038	-8.250	995.888	1006.288
2	247	-355	-225	390	7.525	-7.688	992.850	1014.538
2.5	406	-504	-171	331	11.375	-6.275	985.325	1022.225
3	505	-614	-58	241	13.988	-3.738	973.950	1028.500
3.5	501	-614	-51	213	13.938	-3.300	959.963	1032.238
4	312	-420	255	-80	9.150	4.188	946.025	1035.538
4.5	345	-464	338	-170	10.113	6.350	936.875	1031.350
5	508	-592	394	-230	13.750	7.800	926.763	1025.000
5.5	666	-785	549	-388	18.138	11.713	913.013	1017.200
6	759	-862	681	-503	20.263	14.800	894.875	1005.488
6.5	764	-853	715	-550	20.213	15.813	874.613	990.688
7	720	-837	605	-433	19.463	12.975	854.400	974.875
7.5	624	-736	379	-223	17.000	7.525	834.938	961.900
8	594	-693	295	-131	16.088	5.325	817.938	954.375
8.5	559	-681	271	-104	15.500	4.688	801.850	949.050
9	567	-666	275	-112	15.413	4.838	786.350	944.363
9.5	568	-665	248	-79	15.413	4.088	770.938	939.525
10	451	-553	302	-138	12.550	5.500	755.525	935.438
10.5	415	-539	382	-194	11.925	7.200	742.975	929.938
11	408	-502	481	-286	11.375	9.588	731.050	922.738
11.5	366	-473	502	-329	10.488	10.388	719.675	913.150
12	304	-415	548	-384	8.988	11.650	709.188	902.763
12.5	234	-332	573	-388	7.075	12.013	700.200	891.113
13	378	-501	828	-630	10.988	18.225	693.125	879.100
13.5	387	-486	752	-584	10.913	16.700	682.138	860.875
14	358	-468	699	-516	10.325	15.188	671.225	844.175
14.5	316	-426	718	-543	9.275	15.763	660.900	828.988
15	305	-405	759	-563	8.875	16.525	651.625	813.225
15.5	342	-440	796	-610	9.775	17.575	642.750	796.700
16	241	-353	910	-742	7.425	20.650	632.975	779.125
16.5	220	-318	940	-760	6.725	21.250	625.550	758.475
17	270	-376	916	-742	8.075	20.725	618.825	737.225
17.5	343	-454	942	-746	9.963	21.100	610.750	716.500
18	379	-478	940	-754	10.713	21.175	600.788	695.400
18.5	343	-440	918	-727	9.788	20.563	590.075	674.225
19	197	-296	884	-695	6.163	19.738	580.288	653.663
19.5	201	-307	855	-669	6.350	19.050	574.125	633.925
20	213	-322	831	-642	6.688	18.413	567.775	614.875
20.5	236	-344	809	-655	7.250	18.300	561.088	596.463
21	251	-345	802	-612	7.450	17.675	553.838	578.163
21.5	221	-329	780	-595	6.875	17.188	546.388	560.488
22	241	-352	804	-617	7.413	17.763	539.513	543.300
22.5	233	-329	776	-599	7.025	17.188	532.100	525.538
23	299	-383	762	-586	8.525	16.850	525.075	508.350
23.5	430	-535	740	-556	12.063	16.200	516.550	491.500
24	594	-706	705	-543	16.250	15.600	504.488	475.300
24.5	731	-819	569	-384	19.375	11.913	488.238	459.700
25	871	-960	615	-408	22.888	12.788	468.863	447.788
25.5	743	-860	673	-484	20.038	14.463	445.975	435.000
26	714	-833	726	-527	19.338	15.663	425.938	420.538
26.5	734	-839	790	-585	19.663	17.188	406.600	404.875
27	752	-859	833	-650	20.138	18.538	386.938	387.688
27.5	725	-839	845	-666	19.550	18.888	366.800	369.150
28	523	-648	942	-751	14.638	21.163	347.250	350.263
28.5	496	-601	859	-679	13.713	19.225	332.613	329.100
29	544	-653	788	-599	14.963	17.338	318.900	309.875
29.5	609	-728	755	-562	16.713	16.463	303.938	292.538
30	704	-821	781	-563	19.063	16.800	287.225	276.075
30.5	841	-944	829	-634	22.313	18.288	268.163	259.275
31	849	-957	900	-702	22.575	20.025	245.850	240.988
31.5	869	-978	949	-753	23.088	21.275	223.275	220.963
32	728	-827	882	-685	19.438	19.588	200.188	199.688
32.5	648	-761	901	-702	17.613	20.038	180.750	180.100
33	661	-776	996	-824	17.963	22.750	163.138	160.063
33.5	681	-780	1134	-965	18.263	26.238	145.175	137.313
34	840	-950	1432	-1233	22.375	33.313	126.913	111.075
34.5	898	-1010	1374	-1190	23.850	32.050	104.538	77.763
35	746	-857	1092	-921	20.038	25.163	80.688	45.713
35.5	736	-844	834	-640	19.750	18.425	60.650	20.550
36	759	-854	312	-124	20.163	5.450	40.900	2.125
36.5	779	-880	-40	226	20.738	-3.325	20.738	-3.325
Reference Point							0.000	0.000

C305-IM080040



Serial number probe: 1035333

26-8-13 11:30

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	-191	-17	-729	857	-2.175	-19.825	984.363	971.563
1	-95	-105	-299	437	0.125	-9.200	986.538	991.388
1.5	19	-216	-272	392	2.938	-8.300	986.413	1000.588
2	210	-391	-250	359	7.513	-7.613	983.475	1008.888
2.5	365	-538	-188	308	11.288	-6.200	975.963	1016.500
3	457	-644	-74	220	13.763	-3.675	964.675	1022.700
3.5	454	-642	-82	189	13.700	-3.388	950.913	1026.375
4	264	-451	220	-109	8.938	4.113	937.213	1029.763
4.5	294	-501	305	-181	9.938	6.075	928.275	1025.650
5	460	-624	366	-247	13.550	7.663	918.338	1019.575
5.5	624	-815	518	-394	17.988	11.400	904.788	1011.913
6	709	-897	651	-529	20.075	14.750	886.800	1000.513
6.5	722	-885	678	-572	20.088	15.625	866.725	985.763
7	673	-869	571	-455	19.275	12.825	846.638	970.138
7.5	577	-770	342	-236	16.838	7.225	827.363	957.313
8	550	-723	264	-152	15.913	5.200	810.525	950.088
8.5	513	-714	245	-131	15.338	4.700	794.613	944.888
9	515	-697	238	-139	15.150	4.713	779.275	940.188
9.5	520	-693	218	-106	15.163	4.050	764.125	935.475
10	406	-581	263	-152	12.338	5.188	748.963	931.425
10.5	368	-574	349	-217	11.775	7.075	736.625	926.238
11	365	-530	428	-300	11.188	9.100	724.850	919.163
11.5	322	-500	461	-344	10.275	10.063	713.663	910.063
12	259	-450	520	-409	8.863	11.613	703.388	900.000
12.5	185	-355	541	-415	6.750	11.950	694.525	888.388
13	327	-531	793	-637	10.725	17.875	687.775	876.438
13.5	338	-511	716	-597	10.613	16.413	677.050	858.563
14	308	-493	676	-532	10.013	15.100	666.438	842.150
14.5	272	-454	677	-549	9.075	15.325	656.425	827.050
15	262	-431	714	-574	8.663	16.100	647.350	811.725
15.5	294	-469	769	-626	9.538	17.438	638.688	795.625
16	194	-382	883	-757	7.200	20.500	629.150	778.188
16.5	162	-352	903	-774	6.425	20.963	621.950	757.688
17	220	-411	884	-761	7.888	20.563	615.525	736.725
17.5	297	-483	889	-767	9.750	20.700	607.638	716.163
18	331	-515	910	-776	10.575	21.075	597.888	695.463
18.5	287	-473	877	-755	9.500	20.400	587.313	674.388
19	147	-323	852	-720	5.875	19.650	577.813	653.988
19.5	153	-336	830	-670	6.113	18.750	571.938	634.338
20	162	-355	804	-652	6.463	18.200	565.825	615.588
20.5	188	-377	790	-650	7.063	18.000	559.363	597.388
21	198	-372	771	-633	7.125	17.550	552.300	579.388
21.5	171	-355	743	-621	6.575	17.050	545.175	561.838
22	187	-390	785	-656	7.213	18.013	538.600	544.788
22.5	183	-363	747	-625	6.825	17.150	531.388	526.775
23	248	-422	727	-614	8.375	16.763	524.563	509.625
23.5	378	-563	712	-586	11.763	16.225	516.188	492.863
24	547	-743	678	-565	16.125	15.538	504.425	476.638
24.5	684	-857	529	-412	19.263	11.763	488.300	461.100
25	822	-999	567	-442	22.763	12.613	469.038	449.338
25.5	709	-899	637	-520	20.100	14.463	446.275	436.725
26	676	-873	677	-555	19.363	15.400	426.175	422.263
26.5	702	-881	764	-620	19.788	17.300	406.813	406.863
27	717	-896	810	-688	20.163	18.725	387.025	389.563
27.5	688	-879	834	-703	19.588	19.213	366.863	370.838
28	488	-688	914	-771	14.700	21.063	347.275	351.625
28.5	460	-638	843	-716	13.725	19.488	332.575	330.563
29	505	-688	780	-628	14.913	17.600	318.850	311.075
29.5	570	-764	751	-578	16.675	16.613	303.938	293.475
30	671	-864	731	-598	19.188	16.613	287.263	276.863
30.5	805	-987	813	-660	22.400	18.413	268.075	260.250
31	806	-996	886	-736	22.525	20.275	245.675	241.838
31.5	829	-1021	932	-786	23.125	21.475	223.150	221.563
32	687	-865	876	-732	19.400	20.100	200.025	200.088
32.5	613	-800	875	-734	17.663	20.113	180.625	179.988
33	620	-811	994	-840	17.888	22.925	162.963	159.875
33.5	639	-821	1118	-982	18.250	26.250	145.075	136.950
34	800	-982	1407	-1262	22.275	33.363	126.825	110.700
34.5	860	-1050	1329	-1226	23.875	31.938	104.550	77.338
35	707	-895	1059	-940	20.025	24.988	80.675	45.400
35.5	699	-885	795	-687	19.800	18.525	60.650	20.413
36	720	-890	274	-144	20.125	5.225	40.850	1.888
36.5	740	-918	-62	205	20.725	-3.338	20.725	-3.338
Reference Point							0.000	0.000

C305-IM080040

Serial number probe: DI1244

27-8-13 14:58

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	-152	21	-702	877	-2.163	-19.738	988.088	973.750
1	-54	-68	-273	456	0.175	-9.113	990.250	993.488
1.5	57	-177	-250	412	2.925	-8.275	990.075	1002.600
2	245	-355	-223	384	7.500	-7.588	987.150	1010.875
2.5	400	-501	-163	335	11.263	-6.225	979.650	1018.463
3	498	-612	-53	239	13.875	-3.650	968.388	1024.688
3.5	494	-611	-56	213	13.813	-3.363	954.513	1028.338
4	306	-414	245	-82	9.000	4.088	940.700	1031.700
4.5	337	-462	328	-160	9.988	6.100	931.700	1027.613
5	501	-589	388	-226	13.625	7.675	921.713	1021.513
5.5	659	-784	544	-375	18.038	11.488	908.088	1013.838
6	747	-860	674	-509	20.088	14.788	890.050	1002.350
6.5	759	-851	703	-548	20.125	15.638	869.963	987.563
7	715	-833	596	-433	19.350	12.863	849.838	971.925
7.5	618	-733	368	-213	16.888	7.263	830.488	959.063
8	585	-692	291	-125	15.963	5.200	813.600	951.800
8.5	552	-677	273	-106	15.363	4.738	797.638	946.600
9	558	-663	264	-112	15.263	4.700	782.275	941.863
9.5	561	-662	244	-80	15.288	4.050	767.013	937.163
10	441	-547	292	-131	12.350	5.288	751.725	933.113
10.5	408	-535	374	-193	11.788	7.088	739.375	927.825
11	402	-498	456	-273	11.250	9.113	727.588	920.738
11.5	359	-469	487	-323	10.350	10.125	716.338	911.625
12	297	-411	545	-387	8.850	11.650	705.988	901.500
12.5	228	-322	567	-391	6.875	11.975	697.138	889.850
13	369	-494	818	-612	10.788	17.875	690.263	877.875
13.5	376	-480	745	-575	10.700	16.500	679.475	860.000
14	347	-462	701	-513	10.113	15.175	668.775	843.500
14.5	310	-423	702	-526	9.163	15.350	658.663	828.325
15	299	-400	737	-554	8.738	16.138	649.500	812.975
15.5	332	-437	794	-601	9.613	17.438	640.763	796.838
16	232	-349	910	-732	7.263	20.525	631.150	779.400
16.5	205	-315	927	-747	6.500	20.925	623.888	758.875
17	262	-375	907	-738	7.963	20.563	617.388	737.950
17.5	334	-449	914	-748	9.788	20.775	609.425	717.388
18	369	-482	934	-757	10.638	21.138	599.638	696.613
18.5	330	-439	905	-733	9.613	20.475	589.000	675.475
19	188	-292	878	-696	6.000	19.675	579.388	655.000
19.5	192	-304	851	-648	6.200	18.738	573.388	635.325
20	202	-320	828	-631	6.525	18.238	567.188	616.588
20.5	227	-338	814	-629	7.063	18.038	560.663	598.350
21	240	-341	800	-614	7.263	17.675	553.600	580.313
21.5	214	-321	764	-594	6.688	16.975	546.338	562.638
22	230	-355	814	-630	7.313	18.050	539.650	545.663
22.5	219	-331	769	-606	6.875	17.188	532.338	527.613
23	291	-385	751	-589	8.450	16.750	525.463	510.425
23.5	416	-532	738	-565	11.850	16.288	517.013	493.675
24	589	-705	701	-543	16.175	15.550	505.163	477.388
24.5	722	-818	555	-393	19.250	11.850	488.988	461.838
25	859	-960	589	-416	22.738	12.563	469.738	449.988
25.5	748	-862	662	-497	20.125	14.488	447.000	437.425
26	717	-834	703	-529	19.388	15.400	426.875	422.938
26.5	737	-842	787	-593	19.738	17.250	407.488	407.538
27	755	-858	838	-664	20.163	18.775	387.750	390.288
27.5	727	-844	856	-676	19.638	19.150	367.588	371.513
28	524	-651	941	-752	14.688	21.163	347.950	352.363
28.5	497	-603	867	-697	13.750	19.550	333.263	331.200
29	544	-656	801	-608	15.000	17.613	319.513	311.650
29.5	609	-732	778	-554	16.763	16.650	304.513	294.038
30	706	-825	758	-578	19.138	16.700	287.750	277.388
30.5	842	-949	841	-635	22.388	18.450	268.613	260.688
31	847	-960	911	-713	22.588	20.300	246.225	242.238
31.5	869	-983	957	-762	23.150	21.488	223.638	221.938
32	725	-833	901	-710	19.475	20.138	200.488	200.450
32.5	650	-764	902	-709	17.675	20.138	181.013	180.313
33	662	-778	1018	-820	18.000	22.975	163.338	160.175
33.5	679	-782	1142	-956	18.263	26.225	145.338	137.200
34	840	-951	1436	-1237	22.388	33.413	127.075	110.975
34.5	902	-1013	1358	-1201	23.938	31.988	104.688	77.563
35	742	-859	1087	-919	20.013	25.075	80.750	45.575
35.5	736	-846	819	-663	19.775	18.525	60.738	20.500
36	759	-856	301	-122	20.188	5.288	40.963	1.975
36.5	777	-885	-36	229	20.775	-3.313	20.775	-3.313
Reference Point							0.000	0.000

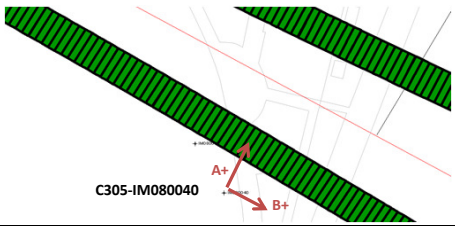
C305-IM080040

Serial number probe: 1035333

26-8-13 12:09

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	-183	-49	-727	835	-1.675	-19.525	1004.338	995.288
1	-84	-121	-288	413	0.463	-8.763	1006.013	1014.813
1.5	27	-220	-281	377	3.088	-8.225	1005.550	1023.575
2	203	-405	-244	341	7.600	-7.313	1002.463	1031.800
2.5	367	-560	-195	287	11.588	-6.025	994.863	1039.113
3	470	-665	-86	187	14.188	-3.413	983.275	1045.138
3.5	464	-661	-82	166	14.063	-3.100	969.088	1048.550
4	271	-465	225	-128	9.200	4.413	955.025	1051.650
4.5	303	-510	298	-180	10.163	5.975	945.825	1047.238
5	472	-645	362	-272	13.963	7.925	935.663	1041.263
5.5	618	-834	512	-421	18.150	11.663	921.700	1033.338
6	710	-908	636	-552	20.225	14.850	903.550	1021.675
6.5	717	-898	688	-591	20.188	15.988	883.325	1006.825
7	674	-878	577	-471	19.400	13.100	863.138	990.838
7.5	575	-784	354	-253	16.988	7.588	843.738	977.738
8	539	-741	262	-177	16.000	5.488	826.750	970.150
8.5	512	-732	241	-146	15.550	4.838	810.750	964.663
9	524	-711	246	-158	15.438	5.050	795.200	959.825
9.5	522	-723	224	-121	15.563	4.313	779.763	954.775
10	406	-605	262	-173	12.638	5.438	764.200	950.463
10.5	377	-585	345	-246	12.025	7.388	751.563	945.025
11	376	-560	447	-317	11.700	9.550	739.538	937.638
11.5	323	-524	473	-356	10.588	10.363	727.838	928.088
12	259	-466	516	-435	9.063	11.888	717.250	917.725
12.5	197	-375	556	-451	7.150	12.588	708.188	905.838
13	341	-554	790	-663	11.188	18.163	701.038	893.250
13.5	346	-538	719	-629	11.050	16.850	689.850	875.088
14	314	-515	675	-556	10.363	15.388	678.800	858.238
14.5	271	-475	694	-567	9.325	15.763	668.438	842.850
15	264	-464	733	-596	9.100	16.613	659.113	827.088
15.5	298	-484	755	-658	9.775	17.663	650.013	810.475
16	200	-402	892	-772	7.525	20.800	640.238	792.813
16.5	170	-376	919	-810	6.825	21.613	632.713	772.013
17	228	-424	881	-782	8.150	20.788	625.888	750.400
17.5	292	-506	897	-783	9.975	21.000	617.738	729.613
18	330	-533	926	-795	10.788	21.513	607.763	708.613
18.5	294	-490	898	-779	9.800	20.963	596.975	687.100
19	141	-349	852	-732	6.125	19.800	587.175	666.138
19.5	160	-359	830	-696	6.488	19.075	581.050	646.338
20	171	-370	800	-669	6.763	18.363	574.563	627.263
20.5	200	-383	817	-693	7.288	18.875	567.800	608.900
21	213	-387	785	-645	7.500	17.875	560.513	590.025
21.5	179	-381	746	-649	7.000	17.438	553.013	572.150
22	191	-395	785	-657	7.325	18.025	546.013	554.713
22.5	177	-381	741	-636	6.975	17.213	538.688	536.688
23	239	-433	744	-631	8.400	17.188	531.713	519.475
23.5	377	-578	725	-600	11.938	16.563	523.313	502.288
24	535	-762	695	-586	16.213	16.013	511.375	485.725
24.5	677	-868	533	-422	19.313	11.938	495.163	469.713
25	807	-1016	594	-462	22.788	13.200	475.850	457.775
25.5	709	-909	645	-531	20.225	14.700	453.063	444.575
26	691	-882	717	-549	19.663	15.825	432.838	429.875
26.5	711	-901	765	-642	20.150	17.588	413.175	414.050
27	728	-915	849	-695	20.538	19.300	393.025	396.463
27.5	700	-902	873	-756	20.025	20.363	372.488	377.163
28	501	-694	962	-763	14.938	21.563	352.463	356.800
28.5	470	-644	873	-706	13.925	19.738	337.525	335.238
29	524	-704	782	-620	15.350	17.525	323.600	315.500
29.5	587	-777	753	-600	17.050	16.913	308.250	297.975
30	674	-876	745	-626	19.375	17.138	291.200	281.063
30.5	820	-1002	823	-682	22.775	18.813	271.825	263.925
31	808	-1016	922	-750	22.800	20.900	249.050	245.113
31.5	836	-1036	939	-795	23.400	21.675	226.250	224.213
32	690	-887	881	-737	19.713	20.225	202.850	202.538
32.5	613	-816	877	-751	17.863	20.350	183.138	182.313
33	631	-828	983	-863	18.238	23.075	165.275	161.963
33.5	646	-841	1128	-1007	18.588	26.688	147.038	138.888
34	810	-1012	1419	-1271	22.775	33.625	128.450	112.200
34.5	866	-1067	1343	-1226	24.163	32.113	105.675	78.575
35	696	-910	1067	-960	20.075	25.338	81.513	46.463
35.5	690	-896	801	-690	19.825	18.638	61.438	21.125
36	724	-912	280	-171	20.450	5.638	41.613	2.488
36.5	741	-952	-70	182	21.163	-3.150	21.163	-3.150
Reference Point							0.000	0.000

C305-IM080040



Serial number probe: DI1244

27-8-13 17:23

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	-145	-17	-704	853	-1.600	-19.463	1007.813	996.825
1	-43	-90	-258	440	0.588	-8.725	1009.413	1016.288
1.5	62	-191	-254	397	3.163	-8.138	1008.825	1025.013
2	248	-374	-223	366	7.775	-7.363	1005.663	1033.150
2.5	404	-519	-175	309	11.538	-6.050	997.888	1040.513
3	503	-630	-57	211	14.163	-3.350	986.350	1046.563
3.5	497	-629	-58	192	14.075	-3.125	972.188	1049.913
4	306	-433	247	-100	9.238	4.338	958.113	1053.038
4.5	341	-477	324	-159	10.225	6.038	948.875	1048.700
5	506	-606	385	-245	13.900	7.875	938.650	1042.663
5.5	660	-801	542	-404	18.263	11.825	924.750	1034.788
6	754	-879	664	-530	20.413	14.925	906.488	1022.963
6.5	762	-869	708	-572	20.388	16.000	886.075	1008.038
7	716	-849	606	-451	19.563	13.213	865.688	992.038
7.5	618	-752	377	-232	17.125	7.613	846.125	978.825
8	584	-707	289	-154	16.138	5.538	829.000	971.213
8.5	552	-696	264	-121	15.600	4.813	812.863	965.675
9	558	-680	270	-129	15.475	4.988	797.263	960.863
9.5	562	-682	247	-103	15.550	4.375	781.788	955.875
10	443	-567	289	-150	12.625	5.488	766.238	951.500
10.5	417	-552	370	-220	12.113	7.375	753.613	946.013
11	409	-520	466	-296	11.613	9.525	741.500	938.638
11.5	363	-487	497	-336	10.625	10.413	729.888	929.113
12	302	-431	547	-407	9.163	11.925	719.263	918.700
12.5	232	-344	581	-426	7.200	12.588	710.100	906.775
13	374	-518	818	-644	11.150	18.275	702.900	894.188
13.5	381	-502	746	-605	11.038	16.888	691.750	875.913
14	353	-480	705	-534	10.413	15.488	680.713	859.025
14.5	312	-443	724	-549	9.438	15.913	670.300	843.538
15	300	-424	753	-577	9.050	16.625	660.863	827.625
15.5	332	-454	777	-631	9.825	17.600	651.813	811.000
16	236	-369	911	-752	7.563	20.788	641.988	793.400
16.5	206	-336	939	-781	6.775	21.500	634.425	772.613
17	264	-393	906	-761	8.213	20.838	627.650	751.113
17.5	336	-466	925	-762	10.025	21.088	619.438	730.275
18	370	-495	945	-778	10.813	21.538	609.413	709.188
18.5	333	-453	919	-758	9.825	20.963	598.600	687.650
19	185	-308	880	-709	6.163	19.863	588.775	666.688
19.5	196	-318	851	-673	6.425	19.050	582.613	646.825
20	209	-330	828	-651	6.738	18.488	576.188	627.775
20.5	235	-345	840	-664	7.250	18.800	569.450	609.288
21	246	-351	804	-623	7.463	17.838	562.200	590.488
21.5	214	-340	769	-621	6.925	17.375	554.738	572.650
22	231	-361	807	-631	7.400	17.975	547.813	555.275
22.5	218	-341	770	-615	6.988	17.313	540.413	537.300
23	279	-399	768	-602	8.475	17.125	533.425	519.988
23.5	411	-545	745	-580	11.950	16.563	524.950	502.863
24	580	-723	714	-565	16.288	15.988	513.000	486.300
24.5	721	-837	559	-399	19.475	11.975	496.713	470.313
25	852	-982	614	-437	22.925	13.138	477.238	458.338
25.5	754	-880	672	-514	20.425	14.825	454.313	445.200
26	729	-848	737	-531	19.713	15.850	433.888	430.375
26.5	749	-862	788	-614	20.138	17.525	414.175	414.525
27	769	-875	868	-675	20.550	19.288	394.038	397.000
27.5	739	-862	892	-728	20.013	20.250	373.488	377.713
28	536	-663	984	-741	14.988	21.563	353.475	357.463
28.5	512	-613	900	-684	14.063	19.800	338.488	335.900
29	557	-672	809	-598	15.363	17.588	324.425	316.100
29.5	620	-746	779	-573	17.075	16.900	309.063	298.513
30	716	-844	775	-609	19.500	17.300	291.988	281.613
30.5	853	-968	844	-663	22.763	18.838	272.488	264.313
31	853	-979	942	-727	22.900	20.863	249.725	245.475
31.5	876	-1003	967	-776	23.488	21.788	226.825	224.613
32	730	-852	910	-715	19.775	20.313	203.338	202.825
32.5	654	-784	905	-724	17.975	20.363	183.563	182.513
33	666	-797	1006	-842	18.288	23.100	165.588	162.150
33.5	685	-803	1148	-982	18.600	26.625	147.300	139.050
34	846	-971	1439	-1254	22.713	33.663	128.700	112.425
34.5	901	-1032	1364	-1207	24.163	32.138	105.988	78.763
35	740	-881	1094	-938	20.263	25.400	81.825	46.625
35.5	734	-867	831	-671	20.013	18.775	61.563	21.225
36	758	-878	303	-151	20.450	5.675	41.550	2.450
36.5	777	-911	-50	208	21.100	-3.225	21.100	-3.225
Reference Point							0.000	0.000

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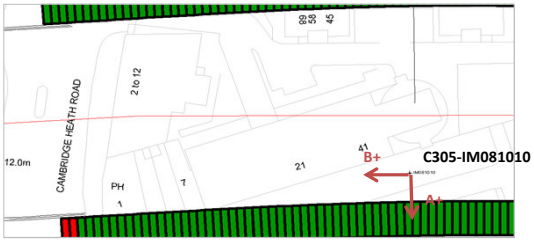

Serial number probe: 1144940

2-12-13 12:20

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	204	-325	629	-419	6.613	13.100	1110.250	1938.188
1	256	-363	618	-412	7.738	12.875	1103.638	1925.088
1.5	276	-380	560	-362	8.200	11.525	1095.900	1912.213
2	131	-247	450	-225	4.725	8.438	1087.700	1900.688
2.5	-2	-96	268	-59	1.175	4.088	1082.975	1892.250
3	-1	-91	35	169	1.125	-1.675	1081.800	1888.163
3.5	55	-138	-73	258	2.413	-4.138	1080.675	1889.838
4	195	-304	-128	337	6.238	-5.813	1078.263	1893.975
4.5	404	-511	-272	474	11.438	-9.325	1072.025	1899.788
5	527	-647	-357	559	14.675	-11.450	1060.588	1909.113
5.5	561	-664	-389	588	15.313	-12.213	1045.913	1920.563
6	640	-751	-404	596	17.388	-12.500	1030.600	1932.775
6.5	762	-870	-414	605	20.400	-12.738	1013.213	1945.275
7	849	-959	-456	647	22.600	-13.788	992.813	1958.013
7.5	786	-895	-283	489	21.013	-9.650	970.213	1971.800
8	751	-860	-38	232	20.138	-3.375	949.200	1981.450
8.5	743	-852	198	18	19.938	2.250	929.063	1984.825
9	754	-853	316	-109	20.088	5.313	909.125	1982.575
9.5	780	-894	464	-271	20.925	9.188	889.038	1977.263
10	825	-923	607	-422	21.850	12.863	868.113	1968.075
10.5	765	-877	773	-574	20.525	16.838	846.263	1955.213
11	763	-875	850	-643	20.475	18.663	825.738	1938.375
11.5	816	-920	911	-706	21.700	20.213	805.263	1919.713
12	891	-998	992	-809	23.613	22.513	783.563	1899.500
12.5	955	-1055	1080	-869	25.125	24.363	759.950	1876.988
13	967	-1072	1177	-970	25.488	26.838	734.825	1852.625
13.5	1008	-1121	1379	-1169	26.613	31.850	709.338	1825.788
14	1055	-1170	1460	-1255	27.813	33.938	682.725	1793.938
14.5	1060	-1168	1478	-1285	27.850	34.538	654.913	1760.000
15	1100	-1205	1499	-1315	28.813	35.175	627.063	1725.463
15.5	1100	-1219	1518	-1326	28.988	35.550	598.250	1690.288
16	1128	-1241	1555	-1364	29.613	36.488	569.263	1654.738
16.5	1052	-1163	1614	-1415	27.688	37.863	539.650	1618.250
17	866	-972	1579	-1384	22.975	37.038	511.963	1580.388
17.5	638	-754	1519	-1305	17.400	35.300	488.988	1543.350
18	486	-606	1455	-1259	13.650	33.925	471.588	1508.050
18.5	353	-458	1396	-1195	10.138	32.388	457.938	1474.125
19	184	-293	1381	-1181	5.963	32.025	447.800	1441.738
19.5	139	-242	1377	-1178	4.763	31.938	441.838	1409.713
20	243	-358	1459	-1268	7.513	34.088	437.075	1377.775
20.5	371	-472	1621	-1434	10.538	38.188	429.563	1343.688
21	490	-598	1780	-1590	13.600	42.125	419.025	1305.500
21.5	627	-729	1926	-1737	16.950	45.788	405.425	1263.375
22	795	-901	2075	-1885	21.200	49.500	388.475	1217.588
22.5	612	-712	1991	-1791	16.550	47.275	367.275	1168.088
23	590	-707	1940	-1751	16.213	46.138	350.725	1120.813
23.5	660	-773	1976	-1776	17.913	46.900	334.513	1074.675
24	676	-776	1994	-1788	18.150	47.275	316.600	1027.775
24.5	685	-811	1983	-1793	18.700	47.200	298.450	980.500
25	752	-854	2001	-1801	20.075	47.525	279.750	933.300
25.5	745	-852	2021	-1814	19.963	47.938	259.675	885.775
26	776	-884	2072	-1870	20.750	49.275	239.713	837.838
26.5	802	-917	2077	-1876	21.488	49.413	218.963	788.563
27	801	-914	2060	-1853	21.438	48.913	197.475	739.150
27.5	787	-904	2060	-1865	21.138	49.063	176.038	690.238
28	771	-870	2118	-1915	20.513	50.413	154.900	641.175
28.5	520	-622	2067	-1866	14.275	49.163	134.388	590.763
29	429	-548	2109	-1911	12.213	50.250	120.113	541.600
29.5	408	-516	2154	-1952	11.550	51.325	107.900	491.350
30	393	-498	2172	-1971	11.138	51.788	96.350	440.025
30.5	400	-510	2159	-1954	11.375	51.413	85.213	388.238
31	376	-473	2114	-1916	10.613	50.375	73.838	336.825
31.5	421	-536	2146	-1939	11.963	51.063	63.225	286.450
32	488	-585	2212	-2015	13.413	52.838	51.263	235.388
32.5	449	-574	2467	-2275	12.788	59.275	37.850	182.550
33	444	-563	2546	-2345	12.588	61.138	25.063	123.275
33.5	440	-558	2585	-2386	12.475	62.138	12.475	62.138
Reference Point							0.000	0.000

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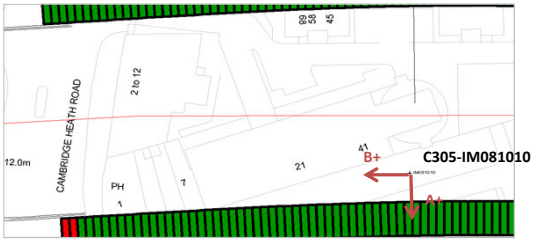

Serial number probe: DI1217

3-12-13 8:45

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	341	-144	493	-574	6.063	13.338	1077.300	1956.100
1	389	-185	484	-567	7.175	13.138	1071.238	1942.763
1.5	413	-201	428	-516	7.675	11.800	1064.063	1929.625
2	270	-67	310	-385	4.213	8.688	1056.388	1917.825
2.5	139	83	129	-215	0.700	4.300	1052.175	1909.138
3	131	90	-104	15	0.513	-1.488	1051.475	1904.838
3.5	191	39	-203	102	1.900	-3.813	1050.963	1906.325
4	336	-133	-261	180	5.863	-5.513	1049.063	1910.138
4.5	541	-332	-408	317	10.913	-9.063	1043.200	1915.650
5	666	-468	-491	401	14.175	-11.150	1032.288	1924.713
5.5	693	-493	-519	432	14.825	-11.888	1018.113	1935.863
6	775	-578	-542	434	16.913	-12.200	1003.288	1947.750
6.5	897	-696	-552	448	19.913	-12.500	986.375	1959.950
7	984	-782	-591	485	22.075	-13.450	966.463	1972.450
7.5	927	-719	-420	333	20.575	-9.413	944.388	1985.900
8	887	-687	-176	74	19.675	-3.125	923.813	1995.313
8.5	884	-676	59	-138	19.500	2.463	904.138	1998.438
9	888	-677	185	-268	19.563	5.663	884.638	1995.975
9.5	913	-713	324	-428	20.325	9.400	865.075	1990.313
10	961	-748	477	-576	21.363	13.163	844.750	1980.913
10.5	902	-697	635	-735	19.988	17.125	823.388	1967.750
11	898	-697	719	-800	19.938	18.988	803.400	1950.625
11.5	951	-748	778	-861	21.238	20.488	783.463	1931.638
12	1033	-824	855	-967	23.213	22.775	762.225	1911.150
12.5	1094	-878	943	-1027	24.650	24.625	739.013	1888.375
13	1099	-900	1043	-1132	24.988	27.188	714.363	1863.750
13.5	1142	-940	1249	-1326	26.025	32.188	689.375	1836.563
14	1192	-989	1325	-1414	27.263	34.238	663.350	1804.375
14.5	1197	-993	1346	-1442	27.375	34.850	636.088	1770.138
15	1232	-1030	1362	-1467	28.275	35.363	608.713	1735.288
15.5	1242	-1045	1388	-1486	28.588	35.925	580.438	1699.925
16	1268	-1065	1424	-1523	29.163	36.838	551.850	1664.000
16.5	1189	-989	1477	-1572	27.225	38.113	522.688	1627.163
17	1007	-797	1449	-1538	22.550	37.338	495.463	1589.050
17.5	780	-577	1381	-1462	16.963	35.538	472.913	1551.713
18	626	-428	1321	-1411	13.175	34.150	455.950	1516.175
18.5	487	-280	1261	-1354	9.588	32.688	442.775	1482.025
19	324	-117	1245	-1336	5.513	32.263	433.188	1449.338
19.5	279	-67	1237	-1333	4.325	32.125	427.675	1417.075
20	384	-180	1323	-1426	7.050	34.363	423.350	1384.950
20.5	503	-300	1485	-1587	10.038	38.400	416.300	1350.588
21	623	-424	1643	-1744	13.088	42.338	406.263	1312.188
21.5	762	-554	1794	-1894	16.450	46.100	393.175	1269.850
22	930	-727	1942	-2038	20.713	49.750	376.725	1223.750
22.5	751	-537	1860	-1948	16.100	47.600	356.013	1174.000
23	726	-528	1808	-1903	15.675	46.388	339.913	1126.400
23.5	794	-595	1845	-1937	17.363	47.275	324.238	1080.013
24	809	-595	1860	-1946	17.550	47.575	306.875	1032.738
24.5	823	-636	1851	-1945	18.238	47.450	289.325	985.163
25	887	-676	1865	-1954	19.538	47.738	271.088	937.713
25.5	878	-674	1884	-1970	19.400	48.175	251.550	889.975
26	917	-711	1933	-2022	20.350	49.438	232.150	841.800
26.5	938	-736	1940	-2029	20.925	49.613	211.800	792.363
27	940	-736	1922	-2008	20.950	49.125	190.875	742.750
27.5	922	-725	1925	-2020	20.588	49.313	169.925	693.625
28	905	-698	1982	-2073	20.038	50.688	149.338	644.313
28.5	662	-443	1931	-2023	13.813	49.425	129.300	593.625
29	571	-373	1971	-2066	11.800	50.463	115.488	544.200
29.5	543	-345	2015	-2110	11.100	51.563	103.688	493.738
30	529	-327	2042	-2130	10.700	52.150	92.588	442.175
30.5	533	-339	2024	-2113	10.900	51.713	81.888	390.025
31	511	-301	1976	-2068	10.150	50.550	70.988	338.313
31.5	556	-362	2010	-2095	11.475	51.313	60.838	287.763
32	626	-412	2074	-2175	12.975	53.113	49.363	236.450
32.5	591	-399	2335	-2432	12.375	59.588	36.388	183.338
33	580	-389	2410	-2501	12.113	61.388	24.013	123.750
33.5	575	-377	2449	-2540	11.900	62.363	11.900	62.363
Reference Point							0.000	0.000

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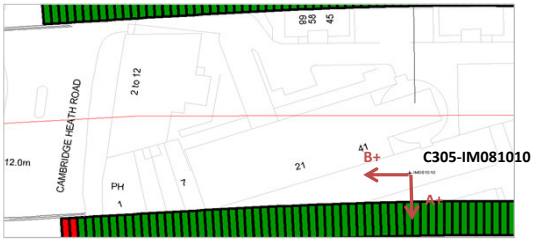

Serial number probe: 1144940

2-12-13 13:40

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	201	-325	620	-427	6.575	13.088	1102.675	1927.750
1	272	-379	636	-452	8.138	13.600	1096.100	1914.663
1.5	273	-377	574	-387	8.125	12.013	1087.963	1901.063
2	126	-245	446	-245	4.638	8.638	1079.838	1889.050
2.5	4	-100	254	-71	1.300	4.063	1075.200	1880.413
3	-1	-91	23	176	1.125	-1.913	1073.900	1876.350
3.5	51	-142	-62	257	2.413	-3.988	1072.775	1878.263
4	199	-311	-135	322	6.375	-5.713	1070.363	1882.250
4.5	402	-515	-277	460	11.463	-9.213	1063.988	1887.963
5	524	-646	-359	547	14.625	-11.325	1052.525	1897.175
5.5	551	-671	-391	578	15.275	-12.113	1037.900	1908.500
6	630	-747	-406	585	17.213	-12.388	1022.625	1920.613
6.5	752	-871	-419	597	20.288	-12.700	1005.413	1933.000
7	844	-959	-455	629	22.538	-13.550	985.125	1945.700
7.5	774	-888	-294	481	20.775	-9.688	962.588	1959.250
8	748	-862	-44	228	20.125	-3.400	941.813	1968.938
8.5	741	-849	174	1	19.875	2.163	921.688	1972.338
9	744	-850	306	-126	19.925	5.400	901.813	1970.175
9.5	769	-891	452	-278	20.750	9.125	881.888	1964.775
10	798	-918	588	-421	21.450	12.613	861.138	1955.650
10.5	753	-873	764	-577	20.325	16.763	839.688	1943.038
11	750	-871	835	-648	20.263	18.538	819.363	1926.275
11.5	811	-917	894	-708	21.600	20.025	799.100	1907.738
12	884	-1001	979	-789	23.563	22.100	777.500	1887.713
12.5	942	-1050	1068	-892	24.900	24.500	753.938	1865.613
13	951	-1056	1161	-985	25.088	26.825	729.038	1841.113
13.5	994	-1106	1374	-1183	26.250	31.963	703.950	1814.288
14	1047	-1153	1439	-1266	27.500	33.813	677.700	1782.325
14.5	1046	-1161	1467	-1292	27.588	34.488	650.200	1748.513
15	1083	-1197	1488	-1318	28.500	35.075	622.613	1714.025
15.5	1100	-1213	1503	-1333	28.913	35.450	594.113	1678.950
16	1118	-1225	1544	-1373	29.288	36.463	565.200	1643.500
16.5	1040	-1159	1596	-1414	27.488	37.625	535.913	1607.038
17	852	-967	1560	-1382	22.738	36.775	508.425	1569.413
17.5	633	-750	1484	-1313	17.288	34.963	485.688	1532.638
18	488	-601	1439	-1262	13.613	33.763	468.400	1497.675
18.5	345	-452	1375	-1202	9.963	32.213	454.788	1463.913
19	177	-287	1359	-1184	5.800	31.788	444.825	1431.700
19.5	144	-244	1354	-1173	4.850	31.588	439.025	1399.913
20	238	-353	1438	-1269	7.388	33.838	434.175	1368.325
20.5	370	-475	1607	-1432	10.563	37.988	426.788	1334.488
21	479	-594	1758	-1596	13.413	41.925	416.225	1296.500
21.5	621	-728	1908	-1743	16.863	45.638	402.813	1254.575
22	788	-895	2053	-1886	21.038	49.238	385.950	1208.938
22.5	608	-711	1967	-1792	16.488	46.988	364.913	1159.700
23	583	-703	1915	-1752	16.075	45.838	348.425	1112.713
23.5	654	-765	1946	-1780	17.738	46.575	332.350	1066.875
24	663	-767	1967	-1793	17.875	47.000	314.613	1020.300
24.5	683	-813	1956	-1785	18.700	46.763	296.738	973.300
25	753	-838	1974	-1805	19.888	47.238	278.038	926.538
25.5	733	-845	1990	-1808	19.725	47.475	258.150	879.300
26	777	-880	2037	-1869	20.713	48.825	238.425	831.825
26.5	795	-907	2043	-1871	21.275	48.925	217.713	783.000
27	794	-905	2027	-1854	21.238	48.513	196.438	734.075
27.5	784	-891	2036	-1863	20.938	48.738	175.200	685.563
28	760	-874	2091	-1922	20.425	50.163	154.263	636.825
28.5	512	-617	2042	-1866	14.113	48.850	133.838	586.663
29	439	-547	2084	-1909	12.325	49.913	119.725	537.813
29.5	394	-515	2119	-1949	11.363	50.850	107.400	487.900
30	393	-503	2148	-1971	11.200	51.488	96.038	437.050
30.5	394	-517	2122	-1955	11.388	50.963	84.838	385.563
31	371	-477	2087	-1913	10.600	50.000	73.450	334.600
31.5	418	-532	2115	-1940	11.875	50.688	62.850	284.600
32	487	-588	2185	-2016	13.438	52.513	50.975	233.913
32.5	460	-569	2449	-2275	12.863	59.050	37.538	181.400
33	440	-552	2515	-2350	12.400	60.813	24.675	122.350
33.5	429	-553	2550	-2373	12.275	61.538	12.275	61.538
Reference Point							0.000	0.000

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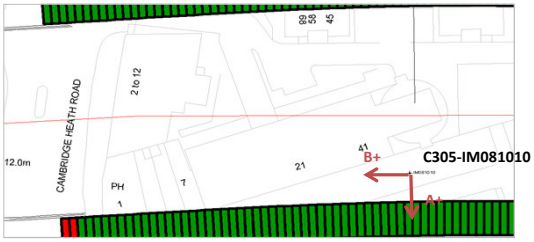

Serial number probe: DI1217

3-12-13 9:29

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	342	-146	487	-588	6.100	13.438	1070.325	1946.038
1	408	-207	498	-605	7.688	13.788	1064.225	1932.600
1.5	410	-205	441	-544	7.688	12.313	1056.538	1918.813
2	259	-66	312	-405	4.063	8.963	1048.850	1906.500
2.5	138	74	117	-228	0.800	4.313	1044.788	1897.538
3	133	84	-113	21	0.613	-1.675	1043.988	1893.225
3.5	187	31	-195	96	1.950	-3.638	1043.375	1894.900
4	334	-134	-268	168	5.850	-5.450	1041.425	1898.538
4.5	538	-339	-415	306	10.963	-9.013	1035.575	1903.988
5	662	-468	-495	389	14.125	-11.050	1024.613	1913.000
5.5	689	-491	-529	420	14.750	-11.863	1010.488	1924.050
6	768	-575	-543	425	16.788	-12.100	995.738	1935.913
6.5	891	-696	-554	440	19.838	-12.425	978.950	1948.013
7	983	-779	-592	476	22.025	-13.350	959.113	1960.438
7.5	912	-710	-431	327	20.275	-9.475	937.088	1973.788
8	882	-689	-178	71	19.638	-3.113	916.813	1983.263
8.5	878	-676	40	-154	19.425	2.425	897.175	1986.375
9	880	-675	167	-283	19.438	5.625	877.750	1983.950
9.5	906	-712	317	-438	20.225	9.438	858.313	1978.325
10	938	-744	453	-577	21.025	12.875	838.088	1968.888
10.5	893	-695	628	-737	19.850	17.063	817.063	1956.013
11	890	-694	698	-805	19.800	18.788	797.213	1938.950
11.5	945	-743	758	-863	21.100	20.263	777.413	1920.163
12	1024	-821	840	-949	23.063	22.363	756.313	1899.900
12.5	1083	-875	937	-1048	24.475	24.813	733.250	1877.538
13	1090	-884	1024	-1144	24.675	27.100	708.775	1852.725
13.5	1132	-933	1235	-1337	25.813	32.150	684.100	1825.625
14	1183	-975	1301	-1424	26.975	34.063	658.288	1793.475
14.5	1187	-986	1330	-1447	27.163	34.713	631.313	1759.413
15	1223	-1023	1349	-1476	28.075	35.313	604.150	1724.700
15.5	1234	-1036	1369	-1489	28.375	35.725	576.075	1689.388
16	1257	-1053	1407	-1529	28.875	36.700	547.700	1653.663
16.5	1180	-984	1463	-1574	27.050	37.963	518.825	1616.963
17	993	-792	1422	-1540	22.313	37.025	491.775	1579.000
17.5	770	-573	1349	-1467	16.788	35.200	469.463	1541.975
18	621	-423	1302	-1415	13.050	33.963	452.675	1506.775
18.5	481	-279	1241	-1358	9.500	32.488	439.625	1472.813
19	318	-114	1223	-1341	5.400	32.050	430.125	1440.325
19.5	278	-69	1222	-1333	4.338	31.938	424.725	1408.275
20	379	-178	1305	-1430	6.963	34.188	420.388	1376.338
20.5	505	-297	1474	-1592	10.025	38.325	413.425	1342.150
21	618	-416	1625	-1750	12.925	42.188	403.400	1303.825
21.5	758	-550	1777	-1897	16.350	45.925	390.475	1261.638
22	926	-716	1919	-2039	20.525	49.475	374.125	1215.713
22.5	741	-536	1832	-1945	15.963	47.213	353.600	1166.238
23	723	-524	1782	-1906	15.588	46.100	337.638	1119.025
23.5	790	-591	1813	-1936	17.263	46.863	322.050	1072.925
24	802	-594	1832	-1950	17.450	47.275	304.788	1026.063
24.5	817	-633	1819	-1946	18.125	47.063	287.338	978.788
25	887	-666	1839	-1958	19.413	47.463	269.213	931.725
25.5	869	-673	1855	-1967	19.275	47.775	249.800	884.263
26	912	-707	1901	-2024	20.238	49.063	230.525	836.488
26.5	932	-731	1908	-2030	20.788	49.225	210.288	787.425
27	931	-730	1890	-2009	20.763	48.738	189.500	738.200
27.5	922	-719	1905	-2022	20.513	49.088	168.738	689.463
28	895	-698	1955	-2081	19.913	50.450	148.225	640.375
28.5	646	-441	1908	-2024	13.588	49.150	128.313	589.925
29	573	-371	1950	-2065	11.800	50.188	114.725	540.775
29.5	535	-342	1983	-2109	10.963	51.150	102.925	490.588
30	531	-326	2017	-2129	10.713	51.825	91.963	439.438
30.5	529	-337	1991	-2113	10.825	51.300	81.250	387.613
31	504	-297	1954	-2070	10.013	50.300	70.425	336.313
31.5	552	-358	1980	-2093	11.375	50.913	60.413	286.013
32	620	-408	2048	-2175	12.850	52.788	49.038	235.100
32.5	598	-395	2313	-2436	12.413	59.363	36.188	182.313
33	580	-379	2382	-2503	11.988	61.063	23.775	122.950
33.5	569	-374	2417	-2534	11.788	61.888	11.788	61.888
Reference Point							0.000	0.000

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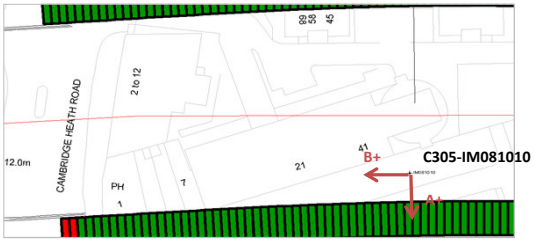

Serial number probe: 1144940

2-12-13 15:03

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	195	-319	635	-449	6.425	13.550	1107.563	1938.788
1	254	-360	623	-420	7.675	13.038	1101.138	1925.238
1.5	281	-374	553	-362	8.188	11.438	1093.463	1912.200
2	133	-247	458	-245	4.750	8.788	1085.275	1900.763
2.5	4	-91	278	-63	1.188	4.263	1080.525	1891.975
3	-7	-80	39	189	0.913	-1.875	1079.338	1887.713
3.5	47	-132	-46	271	2.238	-3.963	1078.425	1889.588
4	195	-312	-137	343	6.338	-6.000	1076.188	1893.550
4.5	406	-523	-278	469	11.613	-9.338	1069.850	1899.550
5	534	-642	-366	560	14.700	-11.575	1058.238	1908.888
5.5	559	-663	-398	588	15.275	-12.325	1043.538	1920.463
6	645	-748	-403	601	17.413	-12.550	1028.263	1932.788
6.5	752	-876	-412	614	20.350	-12.825	1010.850	1945.338
7	853	-954	-447	642	22.588	-13.613	990.500	1958.163
7.5	780	-884	-280	498	20.800	-9.725	967.913	1971.775
8	756	-869	-47	241	20.313	-3.600	947.113	1981.500
8.5	749	-854	182	9	20.038	2.163	926.800	1985.100
9	754	-855	316	-113	20.113	5.363	906.763	1982.938
9.5	780	-879	466	-277	20.738	9.288	886.650	1977.575
10	815	-920	611	-411	21.688	12.775	865.913	1968.288
10.5	768	-872	774	-571	20.500	16.813	844.225	1955.513
11	757	-869	840	-647	20.325	18.588	823.725	1938.700
11.5	810	-926	909	-703	21.700	20.150	803.400	1920.113
12	893	-1002	989	-802	23.688	22.388	781.700	1899.963
12.5	954	-1055	1089	-881	25.113	24.625	758.013	1877.575
13	960	-1069	1167	-972	25.363	26.738	732.900	1852.950
13.5	1002	-1117	1381	-1174	26.488	31.938	707.538	1826.213
14	1053	-1164	1462	-1257	27.713	33.988	681.050	1794.275
14.5	1064	-1166	1485	-1290	27.875	34.688	653.338	1760.288
15	1093	-1203	1505	-1313	28.700	35.225	625.463	1725.600
15.5	1101	-1217	1532	-1329	28.975	35.763	596.763	1690.375
16	1120	-1236	1562	-1369	29.450	36.638	567.788	1654.613
16.5	1057	-1168	1618	-1416	27.813	37.925	538.338	1617.975
17	865	-973	1584	-1382	22.975	37.075	510.525	1580.050
17.5	636	-747	1510	-1301	17.288	35.138	487.550	1542.975
18	492	-599	1458	-1255	13.638	33.913	470.263	1507.838
18.5	346	-456	1388	-1194	10.025	32.275	456.625	1473.925
19	185	-293	1388	-1190	5.975	32.225	446.600	1441.650
19.5	145	-245	1364	-1171	4.875	31.688	440.625	1409.425
20	238	-350	1461	-1272	7.350	34.163	435.750	1377.738
20.5	361	-476	1622	-1432	10.463	38.175	428.400	1343.575
21	482	-599	1779	-1595	13.513	42.175	417.938	1305.400
21.5	625	-735	1930	-1737	17.000	45.838	404.425	1263.225
22	789	-899	2071	-1880	21.100	49.388	387.425	1217.388
22.5	606	-709	1981	-1786	16.438	47.088	366.325	1168.000
23	593	-699	1937	-1750	16.150	46.088	349.888	1120.913
23.5	656	-760	1983	-1778	17.700	47.013	333.738	1074.825
24	667	-764	2002	-1795	17.888	47.463	316.038	1027.813
24.5	690	-815	1978	-1789	18.813	47.088	298.150	980.350
25	751	-844	1996	-1794	19.938	47.375	279.338	933.263
25.5	738	-844	2021	-1818	19.775	47.988	259.400	885.888
26	782	-885	2073	-1861	20.838	49.175	239.625	837.900
26.5	799	-913	2075	-1876	21.400	49.388	218.788	788.725
27	793	-909	2055	-1858	21.275	48.913	197.388	739.338
27.5	781	-893	2060	-1867	20.925	49.088	176.113	690.425
28	756	-882	2128	-1930	20.475	50.725	155.188	641.338
28.5	512	-614	2076	-1872	14.075	49.350	134.713	590.613
29	442	-546	2103	-1911	12.350	50.175	120.638	541.263
29.5	406	-526	2145	-1944	11.650	51.113	108.288	491.088
30	397	-500	2181	-1978	11.213	51.988	96.638	439.975
30.5	401	-519	2154	-1959	11.500	51.413	85.425	387.988
31	363	-474	2119	-1913	10.463	50.400	73.925	336.575
31.5	421	-543	2140	-1945	12.050	51.063	63.463	286.175
32	491	-588	2205	-2016	13.488	52.763	51.413	235.113
32.5	459	-569	2468	-2264	12.850	59.150	37.925	182.350
33	444	-559	2553	-2344	12.538	61.213	25.075	123.200
33.5	444	-559	2582	-2377	12.538	61.988	12.538	61.988
Reference Point							0.000	0.000

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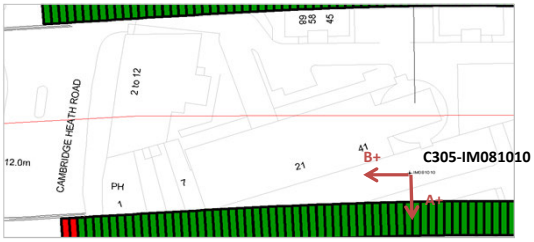

Serial number probe: DI1217

3-12-13 10:32

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	337	-146	500	-601	6.038	13.763	1075.638	1956.725
1	387	-184	487	-577	7.138	13.300	1069.600	1942.963
1.5	413	-200	418	-514	7.663	11.650	1062.463	1929.663
2	267	-70	317	-405	4.213	9.025	1054.800	1918.013
2.5	139	81	145	-218	0.725	4.538	1050.588	1908.988
3	131	91	-97	31	0.500	-1.600	1049.863	1904.450
3.5	189	41	-181	108	1.850	-3.613	1049.363	1906.050
4	337	-135	-270	180	5.900	-5.625	1047.513	1909.663
4.5	541	-341	-410	318	11.025	-9.100	1041.613	1915.288
5	669	-467	-497	404	14.200	-11.263	1030.588	1924.388
5.5	694	-493	-535	434	14.838	-12.113	1016.388	1935.650
6	777	-576	-534	447	16.913	-12.263	1001.550	1947.763
6.5	895	-701	-547	457	19.950	-12.550	984.638	1960.025
7	988	-783	-584	487	22.138	-13.388	964.688	1972.575
7.5	923	-714	-416	335	20.463	-9.388	942.550	1985.963
8	892	-693	-182	80	19.813	-3.275	922.088	1995.350
8.5	883	-677	45	-144	19.500	2.363	902.275	1998.625
9	887	-678	186	-267	19.563	5.663	882.775	1996.263
9.5	917	-708	332	-429	20.313	9.513	863.213	1990.600
10	948	-746	473	-564	21.175	12.963	842.900	1981.088
10.5	899	-701	644	-732	20.000	17.200	821.725	1968.125
11	895	-699	707	-808	19.925	18.938	801.725	1950.925
11.5	948	-749	772	-866	21.213	20.475	781.800	1931.988
12	1031	-823	852	-954	23.175	22.575	760.588	1911.513
12.5	1089	-877	948	-1033	24.575	24.763	737.413	1888.938
13	1096	-894	1032	-1130	24.875	27.025	712.838	1864.175
13.5	1140	-938	1248	-1329	25.975	32.213	687.963	1837.150
14	1189	-986	1325	-1408	27.188	34.163	661.988	1804.938
14.5	1197	-991	1349	-1443	27.350	34.900	634.800	1770.775
15	1232	-1032	1369	-1467	28.300	35.450	607.450	1735.875
15.5	1240	-1043	1393	-1486	28.538	35.988	579.150	1700.425
16	1259	-1064	1431	-1524	29.038	36.938	550.613	1664.438
16.5	1188	-986	1478	-1579	27.175	38.213	521.575	1627.500
17	1000	-796	1447	-1537	22.450	37.300	494.400	1589.288
17.5	778	-575	1377	-1462	16.913	35.488	471.950	1551.988
18	626	-426	1323	-1410	13.150	34.163	455.038	1516.500
18.5	481	-280	1255	-1354	9.513	32.613	441.888	1482.338
19	322	-115	1248	-1342	5.463	32.375	432.375	1449.725
19.5	278	-69	1234	-1332	4.338	32.075	426.913	1417.350
20	381	-175	1324	-1427	6.950	34.388	422.575	1385.275
20.5	503	-300	1486	-1592	10.038	38.475	415.625	1350.888
21	622	-418	1646	-1748	13.000	42.425	405.588	1312.413
21.5	762	-554	1798	-1898	16.450	46.200	392.588	1269.988
22	929	-726	1941	-2037	20.688	49.725	376.138	1223.788
22.5	747	-537	1851	-1946	16.050	47.463	355.450	1174.063
23	724	-529	1808	-1904	15.663	46.400	339.400	1126.600
23.5	796	-590	1846	-1935	17.325	47.263	323.738	1080.200
24	808	-592	1862	-1948	17.500	47.625	306.413	1032.938
24.5	823	-634	1849	-1945	18.213	47.425	288.913	985.313
25	886	-673	1865	-1955	19.488	47.750	270.700	937.888
25.5	878	-672	1881	-1969	19.375	48.125	251.213	890.138
26	916	-714	1933	-2022	20.375	49.438	231.838	842.013
26.5	937	-737	1941	-2029	20.925	49.625	211.463	792.575
27	934	-738	1919	-2010	20.900	49.113	190.538	742.950
27.5	923	-722	1927	-2023	20.563	49.375	169.638	693.838
28	898	-705	1987	-2082	20.038	50.863	149.075	644.463
28.5	652	-441	1937	-2028	13.663	49.563	129.038	593.600
29	575	-369	1974	-2062	11.800	50.450	115.375	544.038
29.5	548	-344	2014	-2103	11.150	51.463	103.575	493.588
30	533	-329	2046	-2131	10.775	52.213	92.425	442.125
30.5	532	-340	2024	-2112	10.900	51.700	81.650	389.913
31	504	-298	1980	-2068	10.025	50.600	70.750	338.213
31.5	558	-361	2004	-2098	11.488	51.275	60.725	287.613
32	627	-407	2068	-2171	12.925	52.988	49.238	236.338
32.5	590	-395	2333	-2425	12.313	59.475	36.313	183.350
33	585	-382	2413	-2505	12.088	61.475	24.000	123.875
33.5	575	-378	2452	-2540	11.913	62.400	11.913	62.400
Reference Point							0.000	0.000

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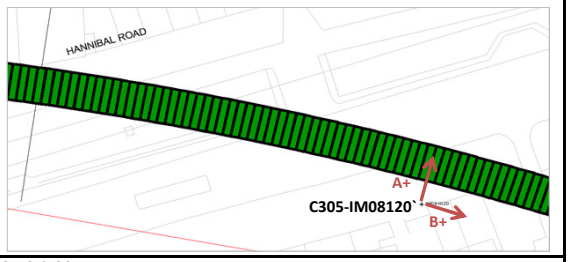

Serial number probe: 1144940

2-12-13 8:20

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	-124	32	790	-610	-1.950	17.500	-494.275	808.375
1	-131	-19	738	-577	-1.400	16.438	-492.325	790.875
1.5	-116	13	625	-463	-1.613	13.600	-490.925	774.438
2	-90	-31	551	-388	-0.738	11.738	-489.313	760.838
2.5	-15	-78	499	-359	0.788	10.725	-488.575	749.100
3	-24	-89	467	-327	0.813	9.925	-489.363	738.375
3.5	-38	-69	404	-236	0.388	8.000	-490.175	728.450
4	156	-301	45	66	5.713	-0.263	-490.563	720.450
4.5	183	-320	442	-276	6.288	8.975	-496.275	720.713
5	185	-318	722	-564	6.288	16.075	-502.563	711.738
5.5	209	-328	778	-627	6.713	17.563	-508.850	695.663
6	138	-275	926	-752	5.163	20.975	-515.563	678.100
6.5	111	-243	1072	-882	4.425	24.425	-520.725	657.125
7	-74	-50	1065	-907	-0.300	24.650	-525.150	632.700
7.5	-74	-40	993	-833	-0.425	22.825	-524.850	608.050
8	-108	-5	978	-816	-1.288	22.425	-524.425	585.225
8.5	-154	42	933	-775	-2.450	21.350	-523.138	562.800
9	-177	39	888	-723	-2.700	20.138	-520.688	541.450
9.5	-183	71	873	-692	-3.175	19.563	-517.988	521.313
10	-414	265	870	-721	-8.488	19.888	-514.813	501.750
10.5	-424	300	844	-696	-9.050	19.250	-506.325	481.863
11	-516	387	851	-693	-11.288	19.300	-497.275	462.613
11.5	-634	513	826	-665	-14.338	18.638	-485.988	443.313
12	-769	635	825	-672	-17.550	18.713	-471.650	424.675
12.5	-929	783	817	-633	-21.400	18.125	-454.100	405.963
13	-731	595	589	-439	-16.575	12.850	-432.700	387.838
13.5	-482	345	678	-522	-10.338	15.000	-416.125	374.988
14	-299	163	640	-488	-5.775	14.100	-405.788	359.988
14.5	-181	57	676	-516	-2.975	14.900	-400.013	345.888
15	28	-132	641	-489	2.000	14.125	-397.038	330.988
15.5	97	-207	662	-496	3.800	14.475	-399.038	316.863
16	-270	134	644	-479	-5.050	14.038	-402.838	302.388
16.5	-391	248	640	-485	-7.988	14.063	-397.788	288.350
17	-487	348	601	-452	-10.438	13.163	-389.800	274.288
17.5	-587	458	569	-415	-13.063	12.300	-379.363	261.125
18	-727	595	554	-393	-16.525	11.838	-366.300	248.825
18.5	-924	801	591	-425	-21.563	12.700	-349.775	236.988
19	-1137	990	782	-633	-26.588	17.688	-328.213	224.288
19.5	-987	839	788	-635	-22.825	17.788	-301.625	206.600
20	-798	663	759	-595	-18.263	16.925	-278.800	188.813
20.5	-731	604	748	-593	-16.688	16.763	-260.538	171.888
21	-609	490	785	-637	-13.738	17.775	-243.850	155.125
21.5	-584	460	906	-743	-13.050	20.613	-230.113	137.350
22	-633	488	1025	-876	-14.013	23.763	-217.063	116.738
22.5	-690	563	1026	-879	-15.663	23.813	-203.050	92.975
23	-653	509	1038	-872	-14.525	23.875	-187.388	69.163
23.5	-537	403	991	-838	-11.750	22.863	-172.863	45.288
24	-548	414	926	-765	-12.025	21.138	-161.113	22.425
24.5	-534	404	805	-657	-11.725	18.275	-149.088	1.287
25	-443	309	795	-630	-9.400	17.813	-137.363	-16.988
25.5	-380	252	733	-579	-7.900	16.400	-127.963	-34.800
26	-284	153	585	-426	-5.463	12.638	-120.063	-51.200
26.5	-195	64	396	-251	-3.238	8.088	-114.600	-63.838
27	-111	-5	310	-158	-1.325	5.850	-111.363	-71.925
27.5	-59	-55	204	-44	-0.050	3.100	-110.038	-77.775
28	-8	-95	-6	175	1.088	-2.263	-109.988	-80.875
28.5	-80	-46	-112	256	-0.425	-4.600	-111.075	-78.613
29	-137	30	-190	367	-2.088	-6.963	-110.650	-74.013
29.5	-210	95	-284	450	-3.813	-9.175	-108.563	-67.050
30	-291	137	-355	522	-5.350	-10.963	-104.750	-57.875
30.5	-302	177	-407	576	-5.988	-12.288	-99.400	-46.913
31	-575	442	-389	548	-12.713	-11.713	-93.413	-34.625
31.5	-886	761	-314	457	-20.588	-9.638	-80.700	-22.913
32	-1077	943	-261	414	-25.250	-8.438	-60.113	-13.275
32.5	-1461	1328	-117	270	-34.863	-4.838	-34.863	-4.838
Reference Point							0.000	0.000

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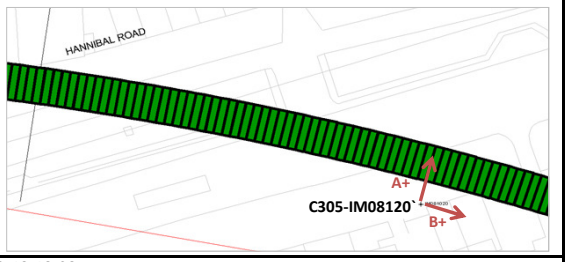

Serial number probe: DI1217

3-12-13 12:02

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	34	207	644	-742	-2.163	17.325	-507.138	794.950
1	23	157	592	-704	-1.675	16.200	-504.975	777.625
1.5	40	183	477	-591	-1.788	13.350	-503.300	761.425
2	74	147	402	-515	-0.913	11.463	-501.513	748.075
2.5	139	91	357	-484	0.600	10.513	-500.600	736.613
3	133	88	327	-453	0.563	9.750	-501.200	726.100
3.5	124	102	257	-367	0.275	7.800	-501.763	716.350
4	316	-132	-100	-66	5.600	-0.425	-502.038	708.550
4.5	344	-151	299	-402	6.188	8.763	-507.638	708.975
5	344	-146	580	-691	6.125	15.888	-513.825	700.213
5.5	363	-156	638	-753	6.488	17.388	-519.950	684.325
6	301	-103	779	-882	5.050	20.763	-526.438	666.938
6.5	273	-66	922	-1010	4.238	24.150	-531.488	646.175
7	85	125	917	-1041	-0.500	24.475	-535.725	622.025
7.5	87	136	852	-963	-0.613	22.688	-535.225	597.550
8	54	169	836	-947	-1.438	22.288	-534.613	574.863
8.5	1	216	789	-899	-2.688	21.100	-533.175	552.575
9	-14	218	746	-849	-2.900	19.938	-530.488	531.475
9.5	-25	245	726	-826	-3.375	19.400	-527.588	511.538
10	-257	444	727	-847	-8.763	19.675	-524.213	492.138
10.5	-267	471	703	-824	-9.225	19.088	-515.450	472.463
11	-352	566	711	-819	-11.475	19.125	-506.225	453.375
11.5	-480	688	686	-793	-14.600	18.488	-494.750	434.250
12	-614	813	678	-798	-17.838	18.450	-480.150	415.763
12.5	-767	959	671	-766	-21.575	17.963	-462.313	397.313
13	-576	769	440	-563	-16.813	12.538	-440.738	379.350
13.5	-322	524	532	-646	-10.575	14.725	-423.925	366.813
14	-138	336	491	-616	-5.925	13.838	-413.350	352.088
14.5	-27	228	532	-642	-3.188	14.675	-407.425	338.250
15	182	37	496	-619	1.813	13.938	-404.238	323.575
15.5	257	-37	513	-629	3.675	14.275	-406.050	309.638
16	-114	304	504	-613	-5.225	13.963	-409.725	295.363
16.5	-228	425	494	-611	-8.163	13.813	-404.500	281.400
17	-327	520	456	-579	-10.588	12.938	-396.338	267.588
17.5	-425	630	424	-543	-13.188	12.088	-385.750	254.650
18	-566	770	404	-524	-16.700	11.600	-372.563	242.563
18.5	-768	974	445	-549	-21.775	12.425	-355.863	230.963
19	-979	1168	634	-760	-26.838	17.425	-334.088	218.538
19.5	-825	1017	646	-768	-23.025	17.675	-307.250	201.113
20	-644	840	609	-725	-18.550	16.675	-284.225	183.438
20.5	-577	782	600	-719	-16.988	16.488	-265.675	166.763
21	-455	659	635	-762	-13.925	17.463	-248.688	150.275
21.5	-428	638	762	-872	-13.325	20.425	-234.763	132.813
22	-470	662	876	-1004	-14.150	23.500	-221.438	112.388
22.5	-535	734	883	-1005	-15.863	23.600	-207.288	88.888
23	-491	683	894	-1005	-14.675	23.738	-191.425	65.288
23.5	-380	578	850	-967	-11.975	22.713	-176.750	41.550
24	-384	592	782	-897	-12.200	20.988	-164.775	18.838
24.5	-380	583	663	-784	-12.038	18.088	-152.575	-2.150
25	-289	480	649	-764	-9.613	17.663	-140.538	-20.238
25.5	-216	423	591	-708	-7.988	16.238	-130.925	-37.900
26	-124	324	439	-557	-5.600	12.450	-122.938	-54.138
26.5	-33	240	255	-376	-3.413	7.888	-117.338	-66.588
27	44	173	162	-286	-1.613	5.600	-113.925	-74.475
27.5	100	122	55	-170	-0.275	2.813	-112.313	-80.075
28	153	81	-152	41	0.900	-2.413	-112.038	-82.888
28.5	74	133	-253	129	-0.738	-4.775	-112.938	-80.475
29	17	205	-340	233	-2.350	-7.163	-112.200	-75.700
29.5	-48	266	-424	322	-3.925	-9.325	-109.850	-68.538
30	-127	310	-504	397	-5.463	-11.263	-105.925	-59.213
30.5	-146	351	-554	452	-6.213	-12.575	-100.463	-47.950
31	-416	615	-531	416	-12.888	-11.838	-94.250	-35.375
31.5	-731	938	-461	325	-20.863	-9.825	-81.363	-23.538
32	-918	1113	-405	286	-25.388	-8.638	-60.500	-13.713
32.5	-1306	1503	-262	144	-35.113	-5.075	-35.113	-5.075
Reference Point							0.000	0.000

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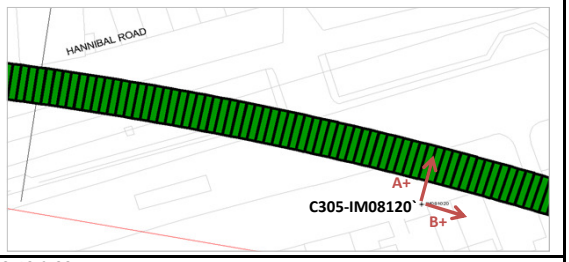

Serial number probe: 1144940

2-12-13 9:23

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	-122	42	802	-595	-2.050	17.463	-495.613	814.938
1	-140	-18	738	-568	-1.525	16.325	-493.563	797.475
1.5	-115	7	638	-455	-1.525	13.663	-492.038	781.150
2	-78	-24	574	-374	-0.675	11.850	-490.513	767.488
2.5	-16	-81	526	-339	0.813	10.813	-489.838	755.638
3	-19	-88	493	-304	0.863	9.963	-490.650	744.825
3.5	-27	-57	418	-219	0.375	7.963	-491.513	734.863
4	161	-317	51	68	5.975	-0.213	-491.888	726.900
4.5	190	-326	457	-263	6.450	9.000	-497.863	727.113
5	193	-315	743	-554	6.350	16.213	-504.313	718.113
5.5	213	-336	798	-617	6.863	17.688	-510.663	701.900
6	143	-269	942	-753	5.150	21.188	-517.525	684.213
6.5	126	-248	1081	-867	4.675	24.350	-522.675	663.025
7	-71	-63	1081	-919	-0.100	25.000	-527.350	638.675
7.5	-64	-38	1020	-832	-0.325	23.150	-527.250	613.675
8	-100	-8	1006	-806	-1.150	22.650	-526.925	590.525
8.5	-162	35	951	-768	-2.463	21.488	-525.775	567.875
9	-184	45	899	-718	-2.863	20.213	-523.313	546.388
9.5	-147	72	910	-687	-2.738	19.963	-520.450	526.175
10	-419	269	876	-719	-8.600	19.938	-517.713	506.213
10.5	-428	303	873	-682	-9.138	19.438	-509.113	486.275
11	-511	394	884	-700	-11.313	19.800	-499.975	466.838
11.5	-634	510	851	-666	-14.300	18.963	-488.663	447.038
12	-776	646	848	-654	-17.775	18.775	-474.363	428.075
12.5	-910	789	837	-625	-21.238	18.275	-456.588	409.300
13	-742	607	595	-424	-16.863	12.738	-435.350	391.025
13.5	-484	356	691	-513	-10.500	15.050	-418.488	378.288
14	-296	167	661	-475	-5.788	14.200	-407.988	363.238
14.5	-183	59	692	-498	-3.025	14.875	-402.200	349.038
15	23	-136	653	-474	1.988	14.088	-399.175	334.163
15.5	99	-214	666	-483	3.913	14.363	-401.163	320.075
16	-275	109	660	-496	-4.800	14.450	-405.075	305.713
16.5	-391	251	659	-470	-8.025	14.113	-400.275	291.263
17	-484	344	625	-439	-10.350	13.300	-392.250	277.150
17.5	-579	464	593	-401	-13.038	12.425	-381.900	263.850
18	-725	599	572	-385	-16.550	11.963	-368.863	251.425
18.5	-932	818	600	-397	-21.875	12.463	-352.313	239.463
19	-1137	1007	803	-619	-26.800	17.775	-330.438	227.000
19.5	-988	849	814	-633	-22.963	18.088	-303.638	209.225
20	-805	669	783	-586	-18.425	17.113	-280.675	191.138
20.5	-732	614	773	-584	-16.825	16.963	-262.250	174.025
21	-616	481	801	-632	-13.713	17.913	-245.425	157.063
21.5	-586	462	919	-733	-13.100	20.650	-231.713	139.150
22	-624	487	1045	-874	-13.888	23.988	-218.613	118.500
22.5	-690	560	1058	-865	-15.625	24.038	-204.725	94.513
23	-648	515	1053	-867	-14.538	24.000	-189.100	70.475
23.5	-538	408	1027	-828	-11.825	23.188	-174.563	46.475
24	-543	423	947	-762	-12.075	21.363	-162.738	23.288
24.5	-533	421	828	-642	-11.925	18.375	-150.663	1.925
25	-450	307	814	-623	-9.463	17.963	-138.738	-16.450
25.5	-377	257	758	-573	-7.925	16.638	-129.275	-34.413
26	-286	155	608	-420	-5.513	12.850	-121.350	-51.050
26.5	-189	72	427	-236	-3.263	8.288	-115.838	-63.900
27	-113	6	328	-142	-1.488	5.875	-112.575	-72.188
27.5	-60	-55	217	-34	-0.063	3.138	-111.088	-78.063
28	1	-85	10	180	1.075	-2.125	-111.025	-81.200
28.5	-80	-40	-89	277	-0.500	-4.575	-112.100	-79.075
29	-147	32	-181	377	-2.238	-6.975	-111.600	-74.500
29.5	-206	96	-274	460	-3.775	-9.175	-109.363	-67.525
30	-288	142	-346	536	-5.375	-11.025	-105.588	-58.350
30.5	-312	180	-413	596	-6.150	-12.613	-100.213	-47.325
31	-579	452	-373	566	-12.888	-11.738	-94.063	-34.713
31.5	-891	770	-302	465	-20.763	-9.588	-81.175	-22.975
32	-1080	945	-243	430	-25.313	-8.413	-60.413	-13.388
32.5	-1472	1336	-104	294	-35.100	-4.975	-35.100	-4.975
Reference Point							0.000	0.000

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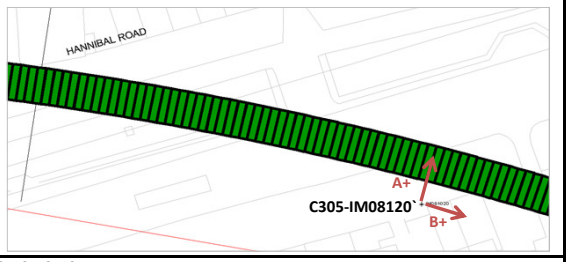
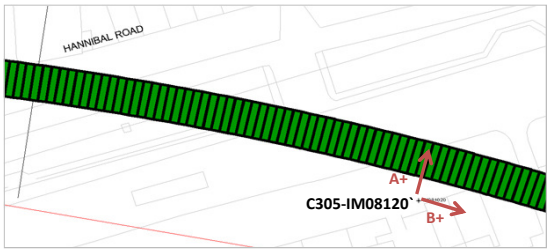


Serial number probe: DI1217

3-12-13 12:43

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	34	212	659	-728	-2.225	17.338	-507.713	801.988
1	15	156	597	-698	-1.763	16.188	-505.488	784.650
1.5	40	183	494	-586	-1.788	13.500	-503.725	768.463
2	77	147	429	-502	-0.875	11.638	-501.938	754.963
2.5	141	92	380	-464	0.613	10.550	-501.063	743.325
3	136	88	347	-432	0.600	9.738	-501.675	732.775
3.5	129	116	276	-350	0.163	7.825	-502.275	723.038
4	317	-140	-92	-57	5.713	-0.438	-502.438	715.213
4.5	346	-151	314	-388	6.213	8.775	-508.150	715.650
5	350	-145	595	-684	6.188	15.988	-514.363	706.875
5.5	371	-161	652	-742	6.650	17.425	-520.550	690.888
6	301	-97	793	-878	4.975	20.888	-527.200	673.463
6.5	281	-75	936	-1000	4.450	24.200	-532.175	652.575
7	86	110	932	-1050	-0.300	24.775	-536.625	628.375
7.5	95	133	877	-959	-0.475	22.950	-536.325	603.600
8	61	170	857	-938	-1.363	22.438	-535.850	580.650
8.5	-4	213	809	-893	-2.713	21.275	-534.488	558.213
9	-22	221	755	-848	-3.038	20.038	-531.775	536.938
9.5	13	250	765	-815	-2.963	19.750	-528.738	516.900
10	-262	445	733	-850	-8.838	19.788	-525.775	497.150
10.5	-268	473	731	-815	-9.263	19.325	-516.938	477.363
11	-348	564	740	-827	-11.400	19.588	-507.675	458.038
11.5	-475	688	704	-791	-14.538	18.688	-496.275	438.450
12	-613	816	699	-784	-17.863	18.538	-481.738	419.763
12.5	-754	965	688	-758	-21.488	18.075	-463.875	401.225
13	-579	780	448	-551	-16.988	12.488	-442.388	383.150
13.5	-322	527	550	-645	-10.613	14.938	-425.400	370.663
14	-134	337	514	-605	-5.888	13.988	-414.788	355.725
14.5	-23	230	551	-628	-3.163	14.738	-408.900	341.738
15	186	37	510	-603	1.863	13.913	-405.738	327.000
15.5	260	-38	523	-614	3.725	14.213	-407.600	313.088
16	-112	285	516	-628	-4.963	14.300	-411.325	298.875
16.5	-228	425	512	-601	-8.163	13.913	-406.363	284.575
17	-327	521	478	-564	-10.600	13.025	-398.200	270.663
17.5	-424	634	446	-529	-13.225	12.188	-387.600	257.638
18	-567	773	426	-510	-16.750	11.700	-374.375	245.450
18.5	-769	988	452	-530	-21.963	12.275	-357.625	233.750
19	-982	1182	660	-750	-27.050	17.625	-335.663	221.475
19.5	-826	1024	671	-759	-23.125	17.875	-308.613	203.850
20	-644	844	634	-718	-18.600	16.900	-285.488	185.975
20.5	-577	785	627	-711	-17.025	16.725	-266.888	169.075
21	-453	659	660	-757	-13.900	17.713	-249.863	152.350
21.5	-428	640	778	-858	-13.350	20.450	-235.963	134.638
22	-464	665	903	-1000	-14.113	23.788	-222.613	114.188
22.5	-533	734	911	-997	-15.838	23.850	-208.500	90.400
23	-489	687	909	-994	-14.700	23.788	-192.663	66.550
23.5	-378	582	878	-960	-12.000	22.975	-177.963	42.763
24	-383	594	801	-887	-12.213	21.100	-165.963	19.788
24.5	-378	593	687	-772	-12.138	18.238	-153.750	-1.313
25	-290	482	665	-751	-9.650	17.700	-141.613	-19.550
25.5	-219	427	617	-702	-8.075	16.488	-131.963	-37.250
26	-123	326	459	-549	-5.613	12.600	-123.888	-53.738
26.5	-33	242	279	-366	-3.438	8.063	-118.275	-66.338
27	46	177	184	-274	-1.638	5.725	-114.838	-74.400
27.5	103	122	75	-167	-0.238	3.025	-113.200	-80.125
28	156	86	-138	49	0.875	-2.338	-112.963	-83.150
28.5	76	137	-232	144	-0.763	-4.700	-113.838	-80.813
29	16	206	-330	246	-2.375	-7.200	-113.075	-76.113
29.5	-46	272	-415	334	-3.975	-9.363	-110.700	-68.913
30	-127	314	-492	411	-5.513	-11.288	-106.725	-59.550
30.5	-151	358	-554	466	-6.363	-12.750	-101.213	-48.263
31	-416	624	-520	435	-13.000	-11.938	-94.850	-35.513
31.5	-736	945	-445	340	-21.013	-9.813	-81.850	-23.575
32	-923	1123	-388	304	-25.575	-8.650	-60.838	-13.763
32.5	-1312	1509	-246	163	-35.263	-5.113	-35.263	-5.113
Reference Point							0.000	0.000

C305-IM081020

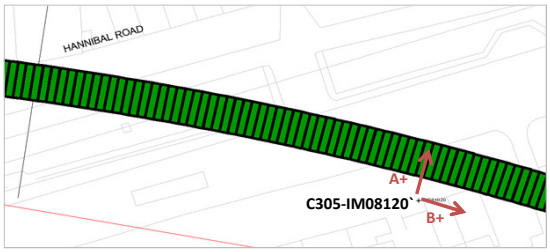


Serial number probe: 1144940

2-12-13 10:32

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	-139	40	801	-604	-2.238	17.563	-497.375	814.963
1	-135	-15	754	-567	-1.500	16.513	-495.138	797.400
1.5	-118	12	646	-444	-1.625	13.625	-493.638	780.888
2	-78	-25	561	-383	-0.663	11.800	-492.013	767.263
2.5	-9	-78	520	-337	0.863	10.713	-491.350	755.463
3	-23	-89	489	-310	0.825	9.988	-492.213	744.750
3.5	-30	-68	415	-224	0.475	7.988	-493.038	734.763
4	161	-302	59	88	5.788	-0.363	-493.513	726.775
4.5	190	-320	456	-267	6.375	9.038	-499.300	727.138
5	192	-315	739	-558	6.338	16.213	-505.675	718.100
5.5	206	-335	810	-614	6.763	17.800	-512.013	701.888
6	147	-282	950	-770	5.363	21.500	-518.775	684.088
6.5	111	-232	1075	-880	4.288	24.438	-524.138	662.588
7	-57	-51	1089	-895	-0.075	24.800	-528.425	638.150
7.5	-62	-33	1028	-827	-0.363	23.188	-528.350	613.350
8	-93	4	995	-811	-1.213	22.575	-527.988	590.163
8.5	-153	34	960	-758	-2.338	21.475	-526.775	567.588
9	-186	55	915	-717	-3.013	20.400	-524.438	546.113
9.5	-198	70	882	-683	-3.350	19.563	-521.425	525.713
10	-412	269	887	-711	-8.513	19.975	-518.075	506.150
10.5	-426	302	880	-691	-9.100	19.638	-509.563	486.175
11	-513	389	885	-696	-11.275	19.763	-500.463	466.538
11.5	-635	515	851	-664	-14.375	18.938	-489.188	446.775
12	-775	642	831	-666	-17.713	18.713	-474.813	427.838
12.5	-932	794	810	-633	-21.575	18.038	-457.100	409.125
13	-730	605	617	-420	-16.688	12.963	-435.525	391.088
13.5	-477	357	695	-516	-10.425	15.138	-418.838	378.125
14	-295	166	664	-478	-5.763	14.275	-408.413	362.988
14.5	-178	47	681	-508	-2.813	14.863	-402.650	348.713
15	29	-136	654	-463	2.063	13.963	-399.838	333.850
15.5	105	-205	667	-486	3.875	14.413	-401.900	319.888
16	-266	138	653	-483	-5.050	14.200	-405.775	305.475
16.5	-382	250	654	-478	-7.900	14.150	-400.725	291.275
17	-486	351	633	-438	-10.463	13.388	-392.825	277.125
17.5	-588	467	598	-392	-13.188	12.375	-382.363	263.738
18	-729	606	572	-385	-16.688	11.963	-369.175	251.363
18.5	-917	811	619	-402	-21.600	12.763	-352.488	239.400
19	-1149	1009	790	-617	-26.975	17.588	-330.888	226.638
19.5	-987	840	814	-621	-22.838	17.938	-303.913	209.050
20	-805	664	772	-589	-18.363	17.013	-281.075	191.113
20.5	-740	609	768	-582	-16.863	16.875	-262.713	174.100
21	-614	488	802	-619	-13.775	17.763	-245.850	157.225
21.5	-595	465	925	-738	-13.250	20.788	-232.075	139.463
22	-626	487	1049	-883	-13.913	24.150	-218.825	118.675
22.5	-690	568	1055	-869	-15.725	24.050	-204.913	94.525
23	-651	508	1060	-866	-14.488	24.075	-189.188	70.475
23.5	-538	408	1018	-827	-11.825	23.063	-174.700	46.400
24	-546	416	953	-760	-12.025	21.413	-162.875	23.338
24.5	-545	409	820	-642	-11.925	18.275	-150.850	1.925
25	-450	313	806	-619	-9.538	17.813	-138.925	-16.350
25.5	-380	256	757	-579	-7.950	16.700	-129.388	-34.163
26	-286	148	608	-422	-5.425	12.875	-121.438	-50.863
26.5	-186	74	419	-241	-3.250	8.250	-116.013	-63.738
27	-118	0	334	-150	-1.475	6.050	-112.763	-71.988
27.5	-51	-50	220	-22	-0.013	3.025	-111.288	-78.038
28	2	-95	5	177	1.213	-2.150	-111.275	-81.063
28.5	-85	-34	-84	272	-0.638	-4.450	-112.488	-78.913
29	-137	38	-178	381	-2.188	-6.988	-111.850	-74.463
29.5	-213	103	-264	469	-3.950	-9.163	-109.663	-67.475
30	-285	140	-351	535	-5.313	-11.075	-105.713	-58.313
30.5	-312	183	-402	602	-6.188	-12.550	-100.400	-47.238
31	-574	443	-378	558	-12.713	-11.700	-94.213	-34.688
31.5	-897	773	-296	479	-20.875	-9.688	-81.500	-22.988
32	-1082	952	-243	432	-25.425	-8.438	-60.625	-13.300
32.5	-1473	1343	-99	290	-35.200	-4.863	-35.200	-4.863
Reference Point							0.000	0.000

C305-IM081020



Serial number probe: DI1217

3-12-13 14:01

Depth (m)	A+	A-	B+	B-	A (mm)	B (mm)	Cumulative A (mm)	Cumulative B (mm)
0.5	19	219	658	-727	-2.500	17.313	-509.800	802.563
1	18	154	608	-696	-1.700	16.300	-507.300	785.250
1.5	42	186	501	-576	-1.800	13.463	-505.600	768.950
2	77	147	420	-510	-0.875	11.625	-503.800	755.488
2.5	144	98	379	-472	0.575	10.638	-502.925	743.863
3	133	88	347	-435	0.563	9.775	-503.500	733.225
3.5	127	105	270	-355	0.275	7.813	-504.063	723.450
4	316	-130	-83	-45	5.575	-0.475	-504.338	715.638
4.5	348	-150	309	-394	6.225	8.788	-509.913	716.113
5	350	-147	590	-684	6.213	15.925	-516.138	707.325
5.5	368	-158	660	-744	6.575	17.550	-522.350	691.400
6	310	-107	801	-894	5.213	21.188	-528.925	673.850
6.5	269	-63	935	-1008	4.150	24.288	-534.138	652.663
7	96	129	939	-1025	-0.413	24.550	-538.288	628.375
7.5	95	142	877	-959	-0.588	22.950	-537.875	603.825
8	60	172	856	-940	-1.400	22.450	-537.288	580.875
8.5	7	214	820	-885	-2.588	21.313	-535.888	558.425
9	-21	223	769	-847	-3.050	20.200	-533.300	537.113
9.5	-37	249	732	-818	-3.575	19.375	-530.250	516.913
10	-258	446	744	-838	-8.800	19.775	-526.675	497.538
10.5	-269	470	730	-818	-9.238	19.350	-517.875	477.763
11	-352	564	738	-826	-11.450	19.550	-508.638	458.413
11.5	-482	689	706	-796	-14.638	18.775	-497.188	438.863
12	-611	820	691	-791	-17.888	18.525	-482.550	420.088
12.5	-769	966	669	-756	-21.688	17.813	-464.663	401.563
13	-574	782	468	-549	-16.950	12.713	-442.975	383.750
13.5	-323	527	552	-646	-10.625	14.975	-426.025	371.038
14	-137	336	515	-604	-5.913	13.988	-415.400	356.063
14.5	-25	227	540	-634	-3.150	14.675	-409.488	342.075
15	186	36	511	-598	1.875	13.863	-406.338	327.400
15.5	258	-32	528	-614	3.625	14.275	-408.213	313.538
16	-111	306	514	-609	-5.213	14.038	-411.838	299.263
16.5	-224	427	515	-602	-8.138	13.963	-406.625	285.225
17	-326	523	482	-573	-10.613	13.188	-398.488	271.263
17.5	-424	635	450	-527	-13.238	12.213	-387.875	258.075
18	-567	777	427	-511	-16.800	11.725	-374.638	245.863
18.5	-763	986	471	-537	-21.863	12.600	-357.838	234.138
19	-985	1178	641	-752	-27.038	17.413	-335.975	221.538
19.5	-828	1019	667	-753	-23.088	17.750	-308.938	204.125
20	-645	843	633	-718	-18.600	16.888	-285.850	186.375
20.5	-575	786	626	-717	-17.013	16.788	-267.250	169.488
21	-455	662	662	-751	-13.963	17.663	-250.238	152.700
21.5	-431	639	775	-867	-13.375	20.525	-236.275	135.038
22	-465	663	901	-1009	-14.100	23.875	-222.900	114.513
22.5	-535	738	913	-1002	-15.913	23.938	-208.800	90.638
23	-490	686	912	-998	-14.700	23.875	-192.888	66.700
23.5	-379	581	868	-960	-12.000	22.850	-178.188	42.825
24	-383	594	807	-892	-12.213	21.238	-166.188	19.975
24.5	-380	589	678	-776	-12.113	18.175	-153.975	-1.263
25	-290	486	660	-752	-9.700	17.650	-141.863	-19.438
25.5	-218	432	615	-705	-8.125	16.500	-132.163	-37.088
26	-124	328	458	-550	-5.650	12.600	-124.038	-53.588
26.5	-33	242	279	-366	-3.438	8.063	-118.388	-66.188
27	47	177	186	-279	-1.625	5.813	-114.950	-74.250
27.5	104	126	76	-157	-0.275	2.913	-113.325	-80.063
28	156	81	-144	50	0.938	-2.425	-113.050	-82.975
28.5	73	136	-232	143	-0.788	-4.688	-113.988	-80.550
29	18	212	-328	246	-2.425	-7.175	-113.200	-75.863
29.5	-51	271	-414	334	-4.025	-9.350	-110.775	-68.688
30	-126	315	-496	409	-5.513	-11.313	-106.750	-59.338
30.5	-149	360	-549	468	-6.363	-12.713	-101.238	-48.025
31	-414	620	-523	426	-12.925	-11.863	-94.875	-35.313
31.5	-740	947	-440	345	-21.088	-9.813	-81.950	-23.450
32	-918	1121	-389	300	-25.488	-8.613	-60.863	-13.638
32.5	-1318	1512	-244	158	-35.375	-5.025	-35.375	-5.025
Reference Point							0.000	0.000

GEOKON 48 Spencer St. Lebanon, N.H. 03766 USA

Model 6100-1M Inclinometer Calibration Report

Date of Calibration: November 8, 2010
Calibration Instruction: CI-6100 Inclinometer

Inclinometer S/N: 1035333
Technician: ER

Please Note:

Measured 40,000sinθ = (Measured 20,000sin+θ) - (Measured 20,000sin-θ)
System Accuracy = ((Measured 40,000sinθ)-(Ideal 40,000sinθ) / 20,000) x 100

When using this probe in conjunction with a GK-603 Readout the Internal Bias may be entered in the Probe Configuration as the "A Axis Zero Shift" and the "B Axis Zero Shift". The Gage Factors may also be applied in the Probe Configuration.

When an Inclinometer Probe and a GK-603 are supplied together the Internal Biases and the Gage Factors are entered at the Geokon facility:

Inclinometer Probe S/N:	1035333
A Axis Zero Offset:	40
B Axis Zero Offset:	20
A Axis Gage Factor:	0.6258
B Axis Gage Factor:	0.6264

The instrument above was found to be in tolerance in all operating ranges.

Calibration Issued By: [redacted] Date: November 08, 2010

QA Manager: [redacted] Date: November 08, 2010

The above named instrument has been calibrated by comparison with standards traceable to the NIST, in compliance with ANSI Z-540-1

Geokon UK
Contract: 2048

C. R. No.: 1035333
Model: 6100-1M
Revision Date: 08 November 2011
Recall Date: 08 November 2012

Authorised by: [redacted]

BS EN ISO 9001:2008
FM 553710

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itmsoil Group Ltd. Registered in England. Number: 4239206. Registered Office: Bell Lane, Uckfield, East Sussex TN22 1QL.

CALIBRATION CERTIFICATE

Instrument Type : **Biaxial Inclinometer System** **Serial Number** : **DI1244**

Instrument Range : **± 30 Degrees**

Calibration Data

Calibration Equipment : **Digital Rotary Table N° :21900871D**
Traceable to National Standards

Calibration Procedure : **O18 Section 10**

Date of Calibration : **4 January 2013**

Ambient Temperature : **21 °C** **Calibrated By** : **J Harvey**

Calibration Results

A Position & Readings		B Positions & Readings	
Degree/mm	Axis A (mm)	Degree/mm	Axis B (mm)
30.00/250.00	250.04	30.00/250.01	250.05
10.00/86.83	86.85	10.00/86.83	86.84
5.00/43.57	43.62	5.00/43.57	43.59
0.00/-0.01	0.03	0.00/-0.01	0.02
-5.00/-43.58	-43.54	-5.00/-43.57	-43.53
-10.00/-86.83	-86.8	-10.00/-86.83	-86.79
-30.00/-250.01	-249.96	-30.00/-250.00	-249.96

The instrument detailed hereon has, as applicable, been tested and calibrated in accordance with procedures, which are part of our ISO9001:2008 Quality Management System, and unless otherwise indicated, performs within ± 0.1mm as specified. Thus, the instrument conforms in all respects to our relevant specifications and drawings.

Certified: [redacted] Line Manager

BS EN ISO 9001:2008
FM 553710

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itmsoil Group Ltd. Registered in England. Number: 4239206. Registered Office: Bell Lane, Uckfield, East Sussex TN22 1QL.

CALIBRATION CERTIFICATE

Instrument Type : **Biaxial Inclinometer System** **Serial Number** : **DI1217**

Instrument Range : **± 30 Degrees**

Calibration Data

Calibration Equipment : **Digital Rotary Table N° :21900871D**
Traceable to National Standards

Calibration Procedure : **OI40**

Date of Calibration : **5 September 2013**

Ambient Temperature : **21 °C** **Calibrated By** : **P.Hulse**

Calibration Results

A Position & Readings		B Positions & Readings	
Degree/mm	Axis A (mm)	Degree/mm	Axis B (mm)
30.00/249.99	250.06	30.00/250.00	249.99
10.00/86.82	86.85	10.00/86.82	86.82
5.00/43.57	43.62	5.00/43.57	43.58
0.00/-0.01	0.04	0.00/-0.01	-0.02
-5.00/-43.58	-43.55	-5.00/-43.58	-43.62
-10.00/-86.82	-86.79	-10.00/-86.83	-86.85
-30.00/-250.01	-249.95	-30.00/-250.00	-250.00

The instrument detailed hereon has, as applicable, been tested and calibrated in accordance with procedures, which are part of our ISO9001:2008 Quality Management System, and unless otherwise indicated, performs within ± 0.1mm as specified. Thus, the instrument conforms in all respects to our relevant specifications and drawings.

Certified: [redacted] itmsoil INSTRUMENTS Line Manager

GEOKON 48 Spencer St. Lebanon, N.H. 03766 USA

Model 6100-1M Inclinometer Calibration Report

Date of Calibration: September 13, 2013
Calibration Instruction: CI-6100 Inclinometer

Inclinometer S/N: 1144940
Technician: ksr

Please Note:

Measured 40,000sinθ = (Measured 20,000sin+θ) - (Measured 20,000sin-θ)
System Accuracy = ((Measured 40,000sinθ)-(Ideal 40,000sinθ) / 20,000) x 100

When using this probe in conjunction with a GK-603 or GK-604, apply the Gage Factors in the Probe Configuration and enter the Zero Offsets as the "A Axis Zero Shift" and the "B Axis Zero Shift."

Inclinometer Probe S/N:	1144940
A Axis Zero Offset:	71
B Axis Zero Offset:	-67
A Axis Gage Factor:	0.6275
B Axis Gage Factor:	0.6303

The instrument above was found to be in tolerance in all operating ranges.

Calibration Issued By: [redacted] Date: 9-17-13

QA Manager: Date: 9-17-13

The above named instrument has been calibrated by comparison with standards traceable to the NIST, in compliance with ANSI Z-540-1

APPENDIX C:

MINUTES CLOSE OUT MEETING AREA 8

I&M Close Out Meeting

Date & Time	18/09/2015 10:30
Meeting No.	6

The purpose of this document is to record agreement to cease monitoring long term monitoring and decommission based on review of the data against the requirements. Agreement from this meeting is then considered acceptance from all parties that the Close Out Report can then be produced based on the data shown and this will be acceptable to the Project Manager.

Attendees:

[redacted]

[redacted]

Data Reviewed

Monitoring References	Location	Settlement rate	Agreement to decommission
Levelling Points Area 8 - Drive Y Stepney Green to Whitechapel Station			
C305-LP081001-C305-LP081018	Stepney Green Site	100% at 2mm/year 100% at 3mm/year	ok, Stepney dewatering covered last by weeks.
C305-LP081101-C305-LP081133	Stepney Green Site 8A	77% at 2mm/year 100% at 3mm/year	ok
C305-LP081201-C305-LP081224	Stepney Green Park	100% at 2mm/year 100% at 3mm/year	ok
C305-LP081301-C305-LP081322	Stepney Green Park	100% at 2mm/year 100% at 3mm/year	ok
C305-LP081401-C305-LP081419	Stepney Green Park 8B	89% at 2mm/year 100% at 3mm/year	ok
C305-LP081501-C305-LP081521	Redmans Road	18% at 2mm/year 24% at 3mm/year	~~ok Stable~~ Take additional set of readings in 3 months
C305-LP081601-C305-LP081633	CRESSY PLACE/JAMAICA ST 8C	65% at 2mm/year 90% at 3mm/year	~~ok Stable after last 3 months~~ Additional set of readings in 3 months
C305-LP081701-C305-LP081715	Redmans Road	92% at 2mm/year 100% at 3mm/year	ok
C305-LP081801-C305-LP081840	Assembley Passage 8D	100% at 2mm/year 100% at 3mm/year	ok
C305-LP082101-C305-LP082120	8E	88% at 2mm/year 94% at 3mm/year	ok
C305-LP082201-C305-LP082217		100% at 2mm/year 100% at 3mm/year	ok
C305-LP081901-C305-LP081954	Mile End Road	79% at 2mm/year 87% at 3mm/year	To be reviewed with CP6 data.
C305-LP082001-C305-LP082045	Mile End Road	40% at 2mm/year 71% at 3mm/year	"
C305-LP082301-C305-LP082322	Transect 8H	89% at 2mm/year 100% at 3mm/year	ok
Sockets Area 8 - Drive Y Stepney Green to Whitechapel Station			
C305-LB080100-C305-LB080104		100% at 2mm/year 100% at 3mm/year	ok
C305-LB080201-C305-LB080218	TINSLEY ROAD	80% at 2mm/year 90% at 3mm/year	Take reading of western end in 3 months.
C305-LB080301-C305-LB080309		100% at 2mm/year 100% at 3mm/year	ok
C305-LB080401-C305-LB080404	JAMAICA ROAD	100% at 2mm/year 100% at 3mm/year	~~ok~~ Take additional set of readings in 3 months.
C305-LB080601-C305-LB080603	JAMAICA ROAD	100% at 2mm/year 100% at 3mm/year	~~Take additional readings in 3 months~~ ok
C305-LB080701-C305-LB080713	REDMAN'S ROAD	67% at 2mm/year 75% at 3mm/year	Take additional readings in 3 months
C305-LB080801-C305-LB080804	HANNIBAL ROAD	0% at 2mm/year 50% at 3mm/year	Take additional readings in 3 months

C305-LB080901-C305-LB080905	HANNIBAL ROAD	20% at 2mm/year 100% at 3mm/year	Take additional set in 3 months. CP9
C305-LB081001-C305-LB081015	HANNIBAL ROAD	100% at 2mm/year 100% at 3mm/year	Ok
C305-LB081101-C305-LB081110	ASSEMBLY PASSAGE	100% at 2mm/year 100% at 3mm/year	ok
C305-LB081301-C305-LB081303		100% at 2mm/year 100% at 3mm/year	ok 11
C305-LB081401-C305-LB081402		100% at 2mm/year 100% at 3mm/year	ok 12
C305-LB081501-C305-LB081511		100% at 2mm/year 100% at 3mm/year	Ok 13
C305-LB081601-C305-LB081606		100% at 2mm/year 100% at 3mm/year	ok
C305-LB081701-C305-LB081705		100% at 2mm/year 100% at 3mm/year	ok
C305-LB081801-C305-LB081810		100% at 2mm/year 100% at 3mm/year	ok
C305-LB081901-C305-LB081906		100% at 2mm/year 100% at 3mm/year	ok
C305-LB082001-C305-LB082006		100% at 2mm/year 100% at 3mm/year	ok
C305-LB082101-C305-LB082105		100% at 2mm/year 100% at 3mm/year	ok
C305-LB082201-C305-LB082203		100% at 2mm/year 100% at 3mm/year	ok

Notes

- Area 4 drawings to be provided.
- ~~Minutes~~ to send to CB
- update dates for CP9 → start of construction, start of depressurisation, switch off
- To close out ~~over~~ on Mile End Road need information from WCH.

Sign off

DSJV	Geocisa	[redacted]	C122
[redacted]	[redacted]	[redacted]	[redacted]

APPENDIX D:

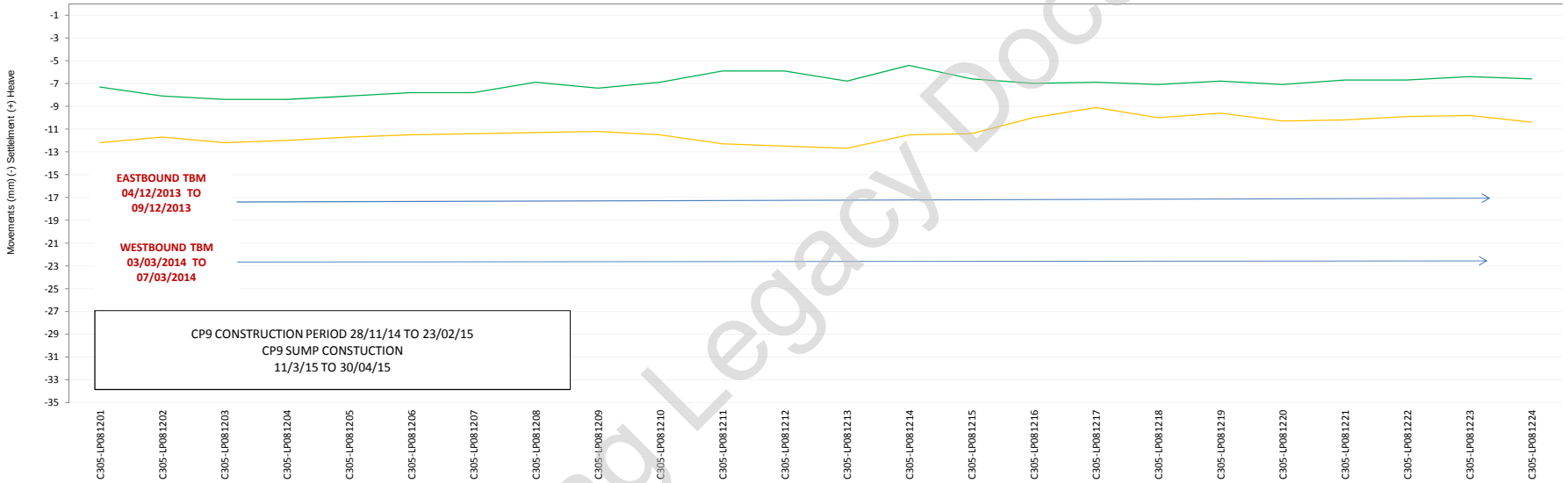
DEFLECTION RATIO

GEOCISA UK

CONTRACT C305

AREA 8 Redmans Road (East) PROFILE
C305-LP081201 - C305-LP081224

SOUTH-EAST **NORTH-WEST**



NOTE: x axis is of monitoring points and is not a scaled distance

TRANSECT	ALERT VALUE	MAX DEFLECTION RATIO	
		After TBMs	After CP9
Redmans Rd. (East)	1/2000	1/17583	1/8893

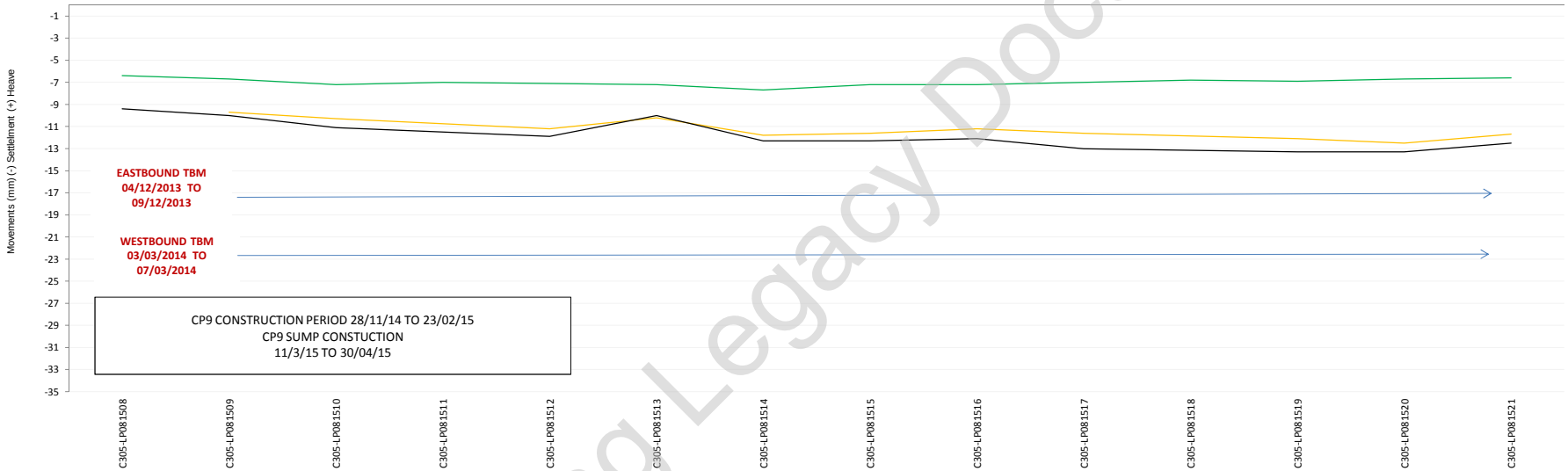
18/03/2014 After TBMs Transit
20/07/2015 After CP9

GEOCISA UK

CONTRACT C305

AREA 8 Redmans Road (West) PROFILE
C305-LP081508 - C305-LP081521

SOUTH-EAST **NORTH-WEST**



NOTE: x axis is of monitoring points and is not a scaled distance

TRANSECT	ALERT VALUE	MAX DEFLECTION RATIO		
		After TBMs	After CP9	Long Term
Redmans Rd. (West)	1/2000	1/35294	1/13043	1/8955

24/03/2014	After TBMs Transit
06/05/2015	After CP9
02/11/2015	Long Term

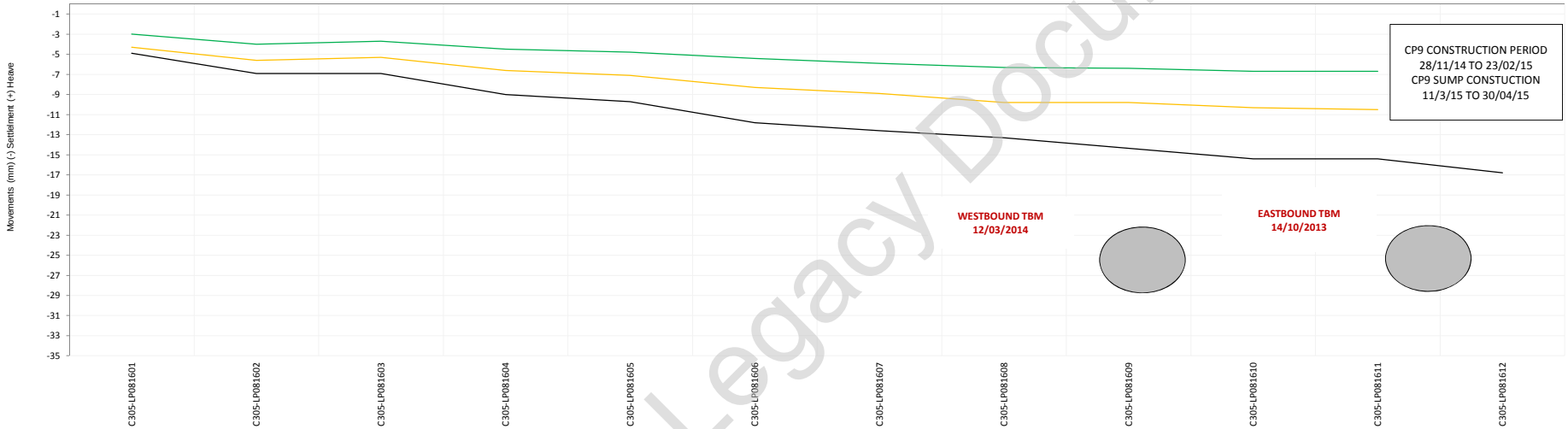
GEOCISA UK

CONTRACT C305

DSJV Crossrail

SOUTH **NORTH**

AREA 8 Jamacia St. PROFILE
C305-LP081601-C305-LP081612



NOTE: x axis is of monitoring points and is not a scaled distance

TRANSECT	ALERT VALUE	MAX DEFLECTION RATIO		
		TBMs Passage	Before Dewatering	After Dewatering
8 C	1/2100	1/20689	1/15000	1/10909

19/03/2014	AFTER TBMs TRANSIT
11/11/2014	BEFORE DEWATERING CP9
02/11/2015	AFTER DEWATERING CP9

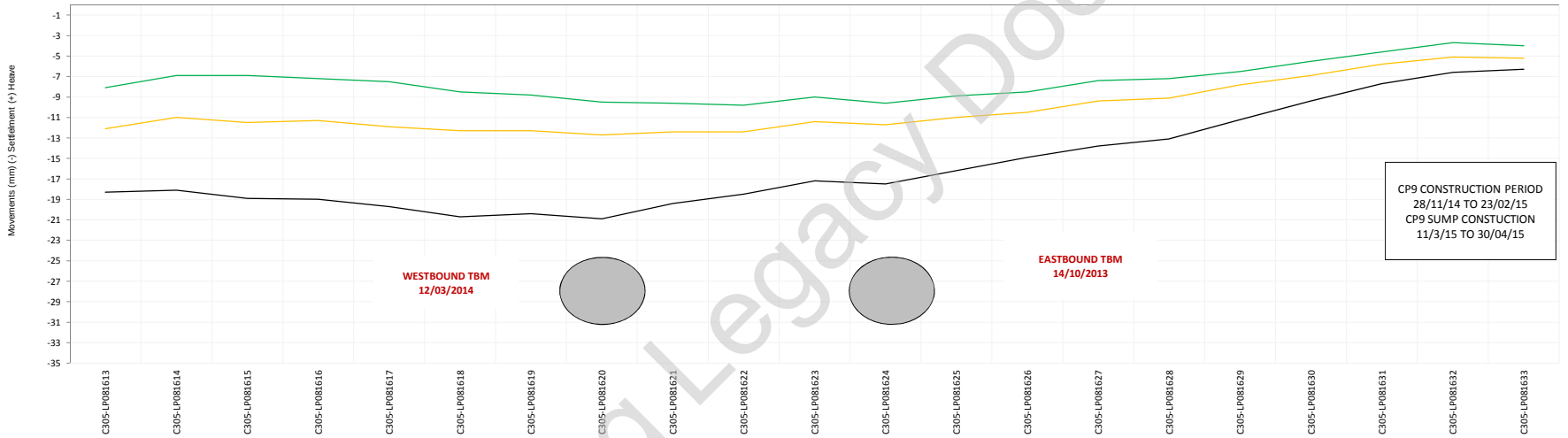
GEOCISA UK

CONTRACT C305

DSJV Crossrail

SOUTH-WEST **NORTH-EAST**

AREA 8 Cressy Place PROFILE
C305-LP081613-C305-LP081633



NOTE: x axis is of monitoring points and is not a scaled distance

TRANSECT	ALERT VALUE	MAX DEFLECTION RATIO		
		TBMs Passage	Before Dewatering	After Dewatering
8 C	1/2000	1/15156	1/15031	1/9204

19/03/2014	AFTER TBMs TRANSIT
11/11/2014	BEFORE DEWATERING CP9
02/11/2015	AFTER DEWATERING CP9

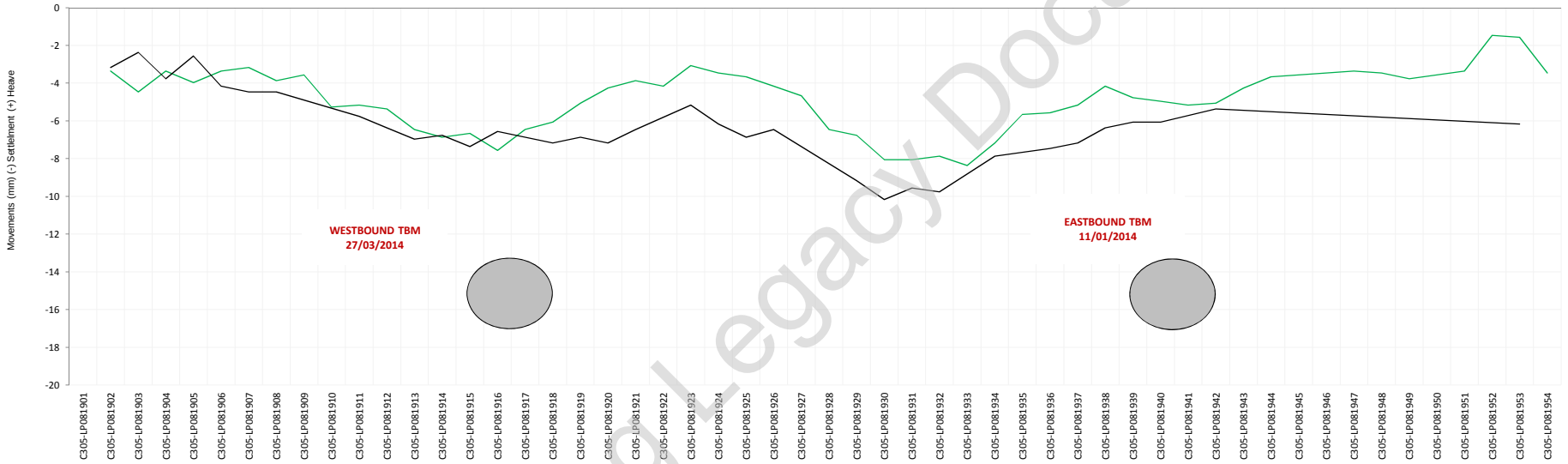
GEOCISA UK

CONTRACT C305

DSJV Crossrail

AREA 8 Mile End Road (South) PROFILE
C305-LP081901-C305-LP081954

NORTH-EAST **SOUTH-WEST**



NOTE: x axis is of monitoring points and is not a scaled distance

TRANSECT	ALERT VALUE	MAX DEFLECTION RATIO	
		TBMs Passage	Long Term
Holloway Storm Relief Sewer	1/2000	1/11540	1/7765

———	04/04/2014	AFTER TBMs TRANSIT
———	22/07/2015	LONG TERM

GEOCISA UK

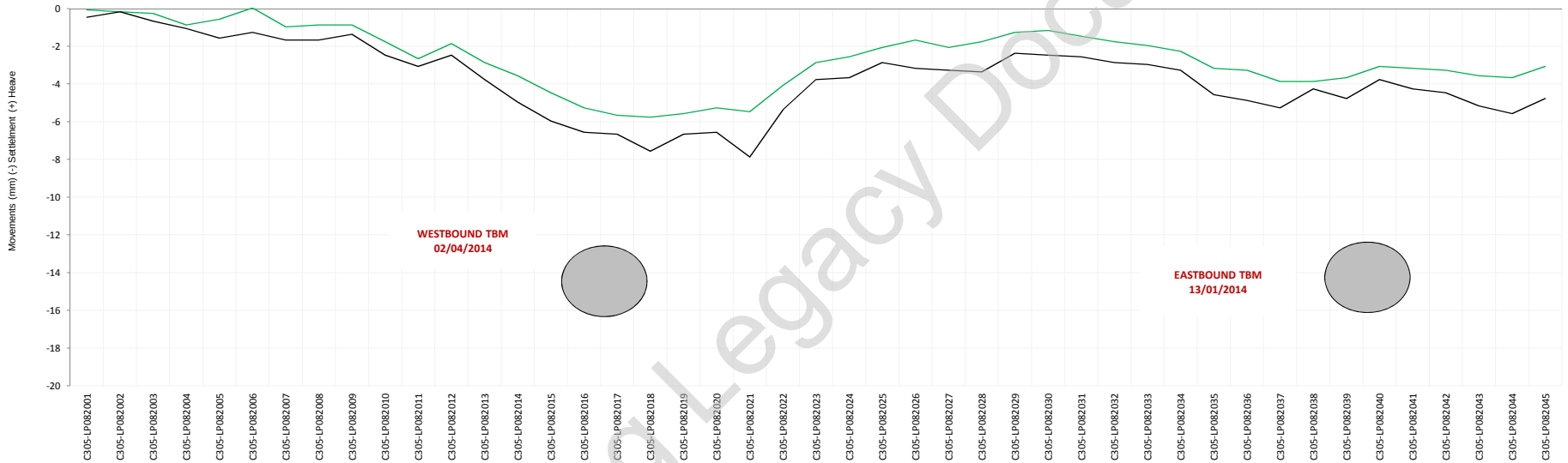
CONTRACT C305

DSJV Crossrail

AREA 8 Mile End Road (North Side) PROFILE
C305-LP082001-C305-LP082045

NORTH-EAST

SOUTH-WEST



NOTE: x axis is of monitoring points and is not a scaled distance

TRANSECT	ALERT VALUE	MAX DEFLECTION RATIO	
		TBMs Passage	Long Term
LU/27 District Line Tunnel	1/2000	1/19167	1/8976

16/04/2014 AFTER TBMs TRANSIT

18/11/2014 LONG TERM

C305 Deflection Ratio - Area 8 Tracker (DR calculation no required)

Loc.	Sub-location	SAI Area	Road	Maximum Recorded movement (+/-mm)	Relevant I&M		Water Mains	Sewers	Comment
					Levelling Points	Shallow Datums	Spec Deflection Ratio; 1 in *X*	Spec Deflection Ratio; 1 in *X*	
Y	SGS-WHI	8	Redmans Road	-9	LP081701-LP081715 + LP081801	SD080020 (-11mm)	**2000**	**2100**	Shallow Datum SD080020 has recorded -11mm of settlement.
Y	SGS-WHI	8	Assembly Passage	-6	LP081801-LP081840	SD080030, SD080040 (-3mm)	**2000**	**2100**	
Y	SGS-WHI	8	Jubliee Street	-6	LP082101-LP082120	-	**2000**	**2000**	
Y	SGS-WHI	8	Cambridge Heath Road	-9	LP082401-LP082439	-	**2000**	**2000**	