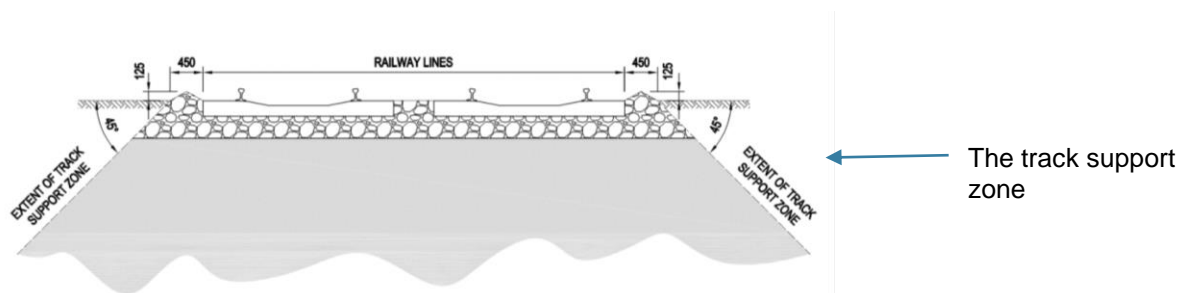


When carrying out construction works adjacent to or over the track it is necessary to monitor and maintain the track to ensure the safe operation of trains on the infrastructure in accordance with Network Rail Standard NR/L2/CIV177.

The track geometry is monitored if:

the construction works are within the track support zone or if construction works are outside the track support zone where an impact assessment has identified the potential for track movement.



ASH Construction Group have extensive experience in track monitoring and have been involved in the following projects:

**Client C Spencer Ltd:**

**Project Name:** EKR (Rochester Station)

**Works & Monitoring Undertaken:**

**Value to ASH-CG £120k**

During Piling works section of the construction of the new Rochester Station, as part of East Kent Re-signaling project, ASH-CG were contracted to undertake daily track monitoring of the operational railway alongside a track rectification award.

**Client TFL (DLR):**

**Project Name:** S&C Installation contract 2020/21

**Works & Monitoring Undertaken:**

**Value to ASH-CG £1.5m**

Installation of new S&C units across various parts of the DLR network, including both conventional ballasted formations & Slab Track works. Where on ballast works included full formation treatment with a full 7day monitoring scheme in pace using digital void metres.

**Client BCM Construction:**

**Project Name:** Power Supply Upgrade.

**Works & Monitoring Undertaken:**

**Value to ASH-CG £90k**

ASH-CG were engaged to undertake the installation of multiple UTXs across various sites that included track monitoring, setting up a baseline survey then carrying out daily monitoring.

**Sites Included:**

Canterbury West, Birchington, Catford,

### **Client BCM Construction:**

**Project Name:** Feltham Re-Signaling Project Phase 2.

**Works & Monitoring Undertaken:**

**Value to ASH-CG £80k**

ASH-CG were awarded a contract to install new EG53 & G55 CMS (Cable Management Sleeper). Across various sites in Wessex, following the installation a full cross level survey was carried out & void metres installed to record any movement in the track under traffic. Any movements were rectified within the T+7 days.

**Sites Included:**

Haslemere, Strawberry Hill, Twickenham, Kingston, Ascot, Feltham.

### **Client RJ Power:**

**Project Name:** Power Supply Upgrade Wessex.

**Works & Monitoring Undertaken:**

**Value to ASH-CG £90k**

ASH-CG were awarded a contract to undertake the installation of UTXs at Shalford & the installation of EG53 CMS at various sites across Wessex.

**Sites Included:**

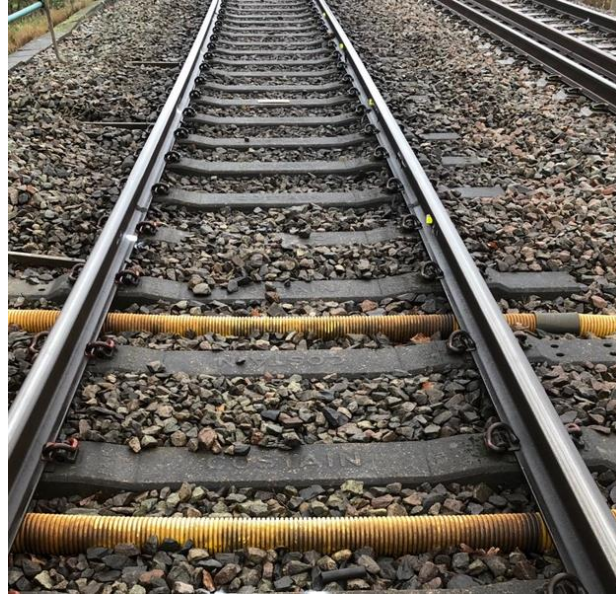
Shalford UTX, CMS installs at Queenstown Road. Haslemere, Bramshot, Liphook.

### **ASH-CG Capabilities**

- Development of the Track Monitoring Plans with the Principal Contractor.
- Undertake Baseline surveys 7 days prior to the commencement of the works, then carrying out a full track monitoring regime working to the agreed TMP
- Setting up retro targets every 3m for the affected area and a topographical survey carried out using a total station and an amber trolley run to record the existing cant, gauge and twist readings.
- 24-hour monitoring of the works during construction (3 surveyors working in rotation).
- Post completion monitoring for 4 weeks after the construction work in accordance with NR standard.

### **Deliverables to the client:**

- Real time movement reports to client.
  - Track monitoring spreadsheet with X-Y and Z changes and report detailing any actions to take following the detection of geometry faults.
  - Critical Rail Temperature Management.
  - Track Rectification as when required with all staff TR00 inducted.
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An example of one of our Track monitoring reports:

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# ASH CONSTRUCTION GROUP

## Track Monitoring Case Study



SITE		Pouparts						Date	02/12/2017						
Up Brighton Slow Line		CMS Sleeper change						Results							
WORK COMPLETED BY															
DOWN Brighton Slow 6FT				OWN Brighton Slow CES				DOWN SLOW LINE							GAUGE
mileage	Target	Elevation DIP	Easting DIP	Target	Elevation DIP	Easting DIP	Cant	Target	Base Cant	Today's Cant	Today's Twist	Today's Gradient	Base Alt		
	UBSS1	0.000	0.002	UBSC1	0.000	0.001	0.000	1	96	96			1441		
	UBSS2	0.001	0.000	UBSC2	0.001	0.000	0.000	2	96	96	0		1441		
	UBSS3	0.000	0.001	UBSC3	0.000	0.001	0.000	3	96	96	0		1442		
	UBSS4	0.001	0.000	UBSC4	0.001	0.001	0.000	4	96	96	0		1440		
	UBSS5	0.002	0.001	UBSC5	0.001	0.001	0.001	5	96	97	-1	1in-3000	1440		
	UBSS6	0.001	0.000	UBSC6	0.001	0.001	0.000	6	96	96	1	1in3000	1440		
	UBSS7	0.000	0.001	UBSC7	0.001	0.002	-0.001	7	96	95	1	1in3000	1440		
2m22yds	UBSS8	0.002	0.000	UBSC8	0.002	0.000	0.000	8	96	96	-1	1in-3000	1440		
	UBSS9	0.002	0.001	UBSC9	0.000	0.000	0.002	9	97	99	-3	1in-1000	1441		
	UBSS10	0.001	0.000	UBSC10	0.002	0.000	-0.001	10	98	97	2	1in1500	1441		
	UBSS11	0.001	0.000	UBSC11	0.001	0.001	0.000	11	98	98	-1	1in-3000	1441		
	UBSS12	0.001	0.000	UBSC12	0.000	0.001	0.001	12	96	97	1	1in3000	1441		
	UBSS13	0.001	0.001	UBSC13	0.001	0.001	0.000	13	96	96	1	1in3000	1440		
	UBSS14	0.001	0.001	UBSC14	0.001	0.001	0.000	14	98	98	-2	1in-1500	1440		
	UBSS15	0.000	0.002	UBSC15	0.000	0.000	0.000	15	96	96	2	1in1500	1441		
	UBSS16	0.001	0.001	UBSC16	0.001	0.000	0.000	16	95	95	1	1in3000	1441		
	UBSS17	0.002	0.000	UBSC17	0.000	0.001	0.002	17	96	98	-3	1in-1000	1441		
	UBSS18	0.001	0.001	UBSC18	0.000	0.000	0.001	18	97	98	0		1440		
	UBSS19	0.000	0.000	UBSC19	0.000	0.001	0.000	19	90	90	8	1in375	1440		
	UBSS20	0.000	0.002	UBSC20	0.000	0.000	0.000	20	89	89	1	1in3000	1440		
	UBSS21	0.000	0.002	UBSC21	0.001	0.002	-0.001	21	86	86	3	1in1000	1440		
	UBSS22	0.001	0.002	UBSC22	0.001	0.000	0.000	22	85	85	1	1in3000	1440		
	UBSS23	0.001	0.001	UBSC23	0.001	0.001	0.000	23	82	82	3	1in1000	1440		
	UBSS24	0.000	0.000	UBSC24	0.000	0.000	0.000	24	78	78	4	1in750	1440		
	UBSS25	0.000	0.001	UBSC25	0.000	0.001	0.000	25	76	76	2	1in1500	1440		
	UBSS26	0.001	0.000	UBSC26	0.000	0.002	0.001	26	72	73	3	1in1000	1440		
	UBSS27	0.000	0.000	UBSC27	0.001	0.002	-0.001	27	69	69	4	1in750	1440		