Q-FREE UK – Project Showcase

DVSA – TARGETED ENFORCEMENT USING WEIGH IN MOTION

Project Stakeholders

CLIENT

Driver & Vehicle Standards Agency

CONTRACTOR

JENOPTIK

SUBCONTRACTOR

Q-FREE

Site Locations

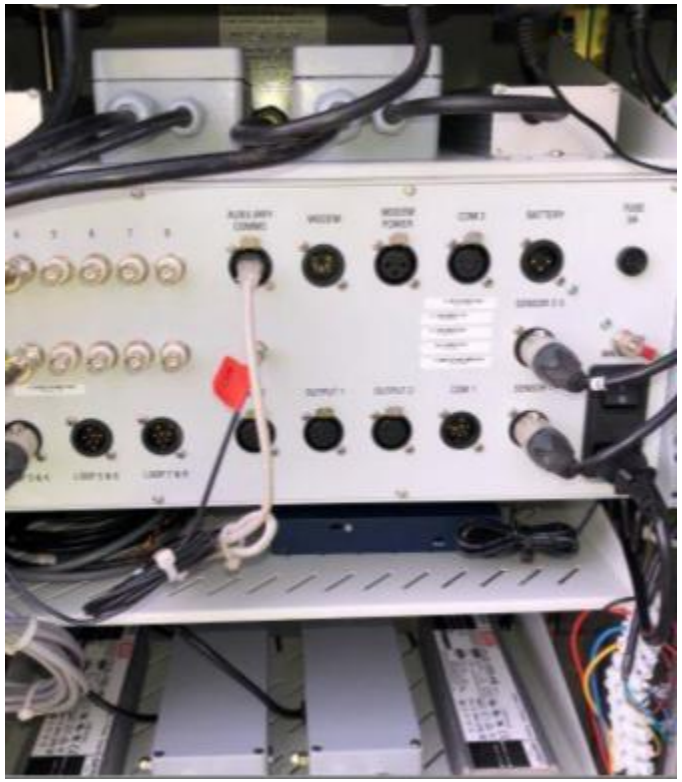
- 16 Locations Across England
- Manly situated around major corridors to ports etc.

Roadside System Components

ANPR

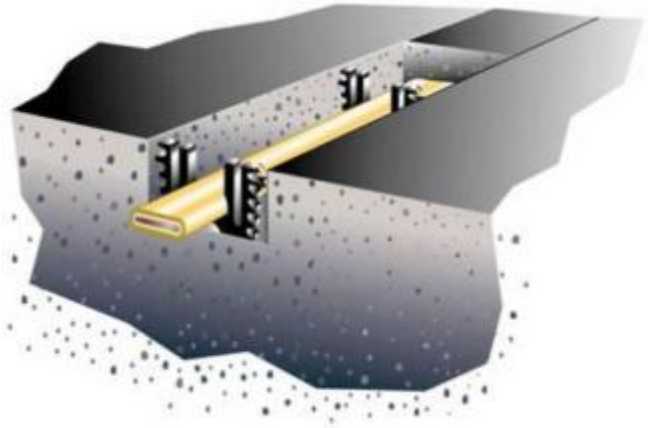
Roadside Cabinet

WIM Counter

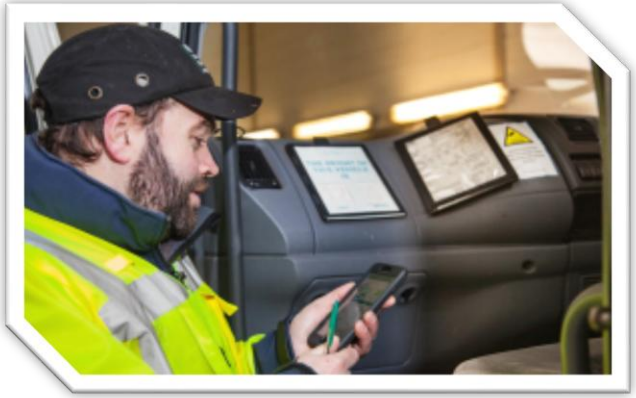


WIM Sensors & Configuration

In the UK DVSA utilise the Class 1 BL Piezo (Polymer) Electric Axle Sensors



DVSA use ANPR & high-speed WIM for preselection



Pre-Set WIM Classifier weight thresholds

C&U Weights with 8% loading										
Vehicle Type	**Class**	**Axles**	**Gross**	**Gross Train**	**Axle 1**	**Axle 2**	**Axle 3**	**Axle 4**	**Axle 5**	**Axle 6**
Light goods	2	2	3780							
Medium Goods	31	2	8100	11880	4104	5400				
2 Ax Rigid	31	2	19440	43200	8100	12420				
3 Ax Rigid	32	3	28080	47520	8100	11880	11880			
4 Ax Rigid	33	4	34560	44280	8100	8100	10260	10260		
4 Ax Draw-bar	41	2+2	19440	41040	8100	12420	10800	10800		
5 Ax Draw-bar	42	2+3	19440	43200	8100	12420	8640	8640	8640	
5 Ax Draw-bar	43	3+2	26784	43200	8100	11880	11880	10800	10800	
6 Ax Draw-bar	44	3+3	28080	47520	8100	11880	11880	8640	8640	8640
3 Ax Artic	51	2+1	19440	28080	8100	12420	10800			
4 Ax Artic	52	2+2	19440	38880	8100	12420	10800	10800		
4 Ax Artic	53	3+1	26784	38880	8100	11880	11880	10800		
5 Ax Artic	54	3+2	26784	43200	8100	11880	11880	9720	9720	
5 Ax Artic	55	2+3	19440	43200	8100	12420	8640	8640	8640	
6 Ax Artic	56	3+3	26784	47520	8100	11880	11880	8640	8640	8640
2 Ax PSV	61	2	19440		8100	12420				
3 Ax PSV	61	3	27000		8100	11880	11880			
2N	2N	2	19440	19440	8100	12420				
3N	3N	3	28080	28080	8100	11880	11880			
4N	4N	4		41040	8100	8100	10260	10260		
5N	5N	5		43200	8100	11880	8640	8640	8640	
6N	6N	6	26784	47520	8100	11880	11880	8640	8640	8640
7N	7N	7		47520						

Accuracy Benefits

ANPR + WIM

By amalgamating these technologies, offending vehicles can be specifically and accurately identified for possible action.

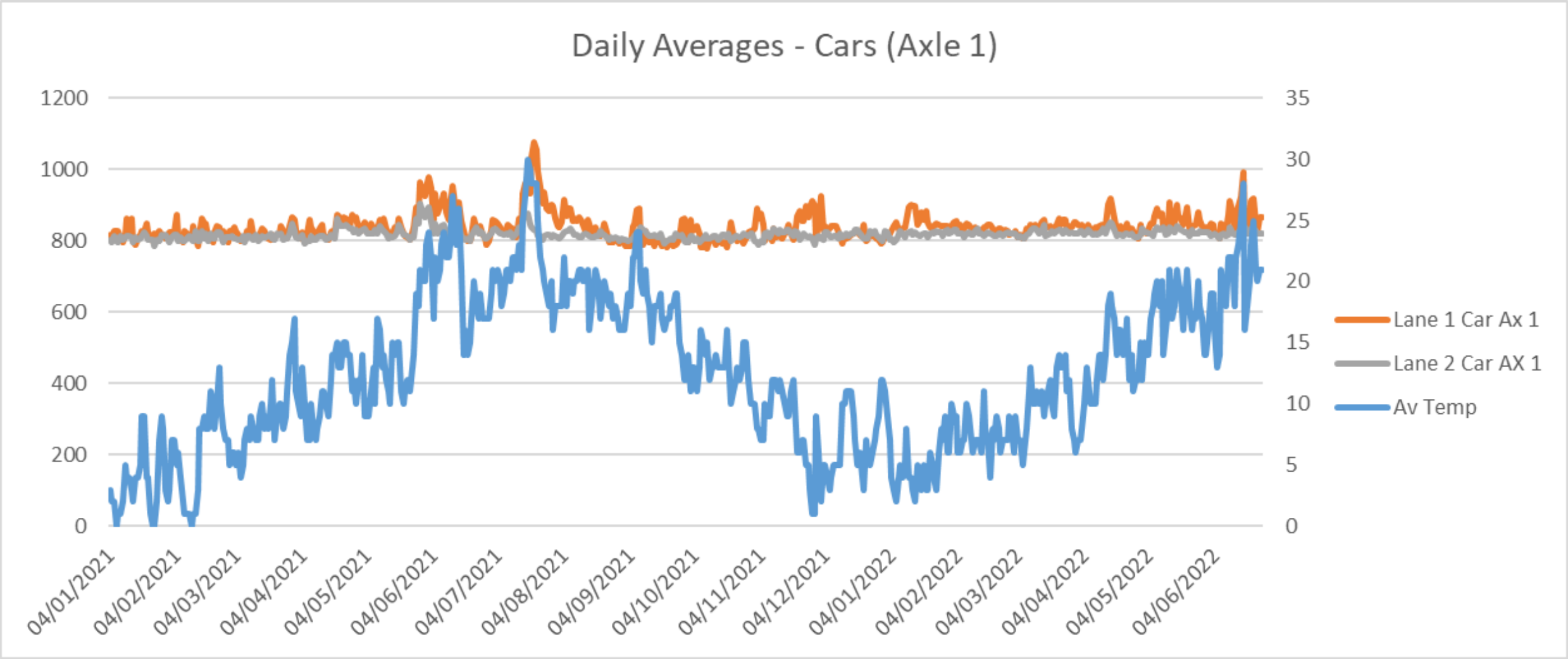
This target-led approach has resulted in greater efficiencies through significantly reducing the 'chance' element and lessening the impact upon law-abiding road users.

Continuous monitoring of results

VEN_CHECK_SITE_NAME	wim_date	wim_time	sequence_numbe	wim_lane	wim_total_axle	temperature	Gross_Weight_Difference	VEN_ACTUAL_TRAIN_WG	wim_gross_weight	wim_axle1_weigh	wim_axle2_weigh	wim_axle3_weigh	wim_axle4_weigh	wim_axle5_weigh	wim
BOUGHTON WEIGHBRIDGE	13/12/2020	17:46:30	526006	1	5	9	11.0%	18140	20139	7370	5475	2485	2377	2432	
BOUGHTON WEIGHBRIDGE	17/12/2020	14:40:37	621206	1	2	11	11.4%	8680	9672	3347	6325				
BOUGHTON WEIGHBRIDGE	17/12/2020	17:02:05	626060	1	3	10	13.4%	28040	31784	8842	13485	9457			
BOUGHTON WEIGHBRIDGE	06/01/2021	15:33:45	961752	1	5	5	-3.1%	22720	22026	6362	5942	3395	3310	3017	
BOUGHTON WEIGHBRIDGE	06/01/2021	17:20:28	964816	1	5	4	0.0%	17330	17324	5930	5325	2075	2097	1897	
BOUGHTON WEIGHBRIDGE	06/01/2021	20:15:05	967571	1	5	3	-8.6%	17330	15848	5632	4732	1895	1827	1762	
BOUGHTON WEIGHBRIDGE	07/01/2021	17:49:29	985077	1	5	3	-1.8%	14990	14727	5600	3770	1860	1772	1725	
BOUGHTON WEIGHBRIDGE	08/01/2021	08:06:03	992043	1	6	2	2.4%	39310	40272	6580	2310	9347	7515	7485	
BOUGHTON WEIGHBRIDGE	08/01/2021	[illegible]	997988	1	5	4	-8.7%	17690	16154	6060	4780	1885	1797	1632	
BOUGHTON WEIGHBRIDGE	08/01/2021	[illegible]	1001448	[illegible]	5	[illegible]	[illegible]	37870	38921	7260	10172	7447	7002	7040	
BOUGHTON WEIGHBRIDGE	[illegible]	[illegible]	[illegible]	[illegible]	5	[illegible]	[illegible]	[illegible]	17121	6017	4275	2362	2362	2105	
BOUGHTON WEIGHBRIDGE	[illegible]	[illegible]	[illegible]	[illegible]	5	[illegible]	[illegible]	[illegible]	22911	6485	6552	3277	3422	3175	
BOUGHTON WEIGHBRIDGE	10/01/2021	12:27:38	1023922	1	5	4	0.0%	16510	16516	6117	4327	2090	2090	1892	
BOUGHTON WEIGHBRIDGE	10/01/2021	17:01:02	1027057	1	5	4	-4.0%	17740	17031	6330	4637	2060	2067	1937	
BOUGHTON WEIGHBRIDGE	[illegible]	[illegible]	1027230	1	4	4	-4.0%	17460	16764	5937	5235	2830	2762		
BOUGHTON WEIGHBRIDGE	[illegible]	[illegible]	1028676	1	5	3	-6.1%	18310	17190	6150	3985	2335	2405	2315	
BOUGHTON WEIGHBRIDGE	[illegible]	[illegible]	1029572	1	4	3	-4.3%	16600	15887	6132	4585	2675	2495		
BOUGHTON WEIGHBRIDGE	12/01/2021	07:22:41	1051994	1	5	8	-4.6%	15090	14393	5805	3542	1752	1692	1602	
BOUGHTON WEIGHBRIDGE	12/01/2021	07:39:46	1052584	1	5	8	1.7%	20340	20681	7142	6900	2252	2145	2242	
BOUGHTON WEIGHBRIDGE	19/01/2021	01:16:41	1172641	1	5	7	-1.6%	18480	18182	6480	4690	2445	2220	2347	
BOUGHTON WEIGHBRIDGE	19/01/2021	03:53:06	1172992	1	5	8	-2.1%	17230	16872	6420	4727	1875	1930	1920	
BOUGHTON WEIGHBRIDGE	20/01/2021	00:41:08	1193671	1	4	9	-0.3%	17470	17421	6382	5157	2962	2920		
BOUGHTON WEIGHBRIDGE	20/01/2021	08:54:23	1199382	1	5	9	1.1%	20350	20568	6577	7392	2222	2290	2087	
BOUGHTON WEIGHBRIDGE	20/01/2021	09:28:31	1200037	1	5	9	-5.3%	17630	16696	5722	4597	2202	2130	2045	
BOUGHTON WEIGHBRIDGE	20/01/2021	09:28:33	1200039	1	4	9	1.0%	18090	18274	6747	4945	3357	3225		
BOUGHTON WEIGHBRIDGE	20/01/2021	10:57:22	1201801	1	5	10	-2.8%	17070	16599	6260	5062	1715	1870	1692	
BOUGHTON WEIGHBRIDGE	20/01/2021	11:03:58	1201909	1	4	10	-1.6%	15830	15574	5977	4217	2670	2710		
BOUGHTON WEIGHBRIDGE	20/01/2021	12:51:15	1203916	1	5	10	-0.7%	15540	15429	6277	3565	1990	1975	1622	
BOUGHTON WEIGHBRIDGE	21/01/2021	08:05:26	1219251	1	5	5	-3.5%	15240	14714	5907	3782	1720	1660	1645	
BOUGHTON WEIGHBRIDGE	21/01/2021	08:45:36	1220295	1	4	5	0.9%	25960	26189	6887	8115	5780	5407		
BOUGHTON WEIGHBRIDGE	21/01/2021	09:54:55	1221678	1	6	6	2.5%	31950	32739	5915	5495	8145	4597	4340	
BOUGHTON WEIGHBRIDGE	21/01/2021	09:59:31	1221770	1	5	6	-3.9%	16920	16257	5580	4610	2095	1935	2037	
BOUGHTON WEIGHBRIDGE	21/01/2021	10:43:54	1222637	1	5	7	-2.0%	22150	21709	6530	5202	3582	3195	3200	
BOUGHTON WEIGHBRIDGE	21/01/2021	11:00:38	1222992	1	5	7	-2.8%	17793	17294	6305	5305	1940	1942	1802	
BOUGHTON WEIGHBRIDGE	21/01/2021	12:40:47	1224891	1	5	10	1.9%	17770	18106	6615	5227	2037	2117	2110	
BOUGHTON WEIGHBRIDGE	21/01/2021	15:56:42	1229527	1	5	9	1.5%	17000	17249	6175	4035	2317	2387	2335	
BOUGHTON WEIGHBRIDGE	21/01/2021	20:28:00	1235434	1	5	7	2.3%	24210	24761	6697	6987	3795	3597	3685	
BOUGHTON WEIGHBRIDGE	22/01/2021	08:19:30	1241192	1	5	3	-2.7%	20480	19926	6255	6277	2562	2525	2307	
BOUGHTON WEIGHBRIDGE	22/01/2021	08:27:37	1241419	1	4	3	-3.4%	19770	19094	6500	5412	3622	3560		
BOUGHTON WEIGHBRIDGE	22/01/2021	09:10:57	1242398	1	5	3	-4.8%	15300	14569	6230	3422	1652	1720	1545	
BOUGHTON WEIGHBRIDGE	22/01/2021	10:28:01	1243888	1	5	4	-2.5%	28430	27731	5390	11277	3647	3727	3690	
BOUGHTON WEIGHBRIDGE	22/01/2021	12:15:19	1246027	1	5	8	3.5%	34360	35551	7000	10695	5987	6092	5777	
BOUGHTON WEIGHBRIDGE	22/01/2021	15:15:04	1250325	1	5	8	-0.6%	29850	29677	7550	9780	4297	4165	3885	
BOUGHTON WEIGHBRIDGE	22/01/2021	16:49:26	1253451	1	4	7	-4.8%	15970	15201	6065	4302	2477	2357		
BOUGHTON WEIGHBRIDGE	22/01/2021	20:33:23	1257839	1	4	5	-4.0%	18360	17629	6077	5602	3005	2945		
BOUGHTON WEIGHBRIDGE	24/01/2021	15:16:39	1277591	1	5	5	-1.7%	15090	14827	6085	3530	1947	1655	1610	
BOUGHTON WEIGHBRIDGE	24/01/2021	16:41:16	1278475	1	5	4	2.5%	15350	15734	6342	3970	1765	1962	1695	
BOUGHTON WEIGHBRIDGE	26/01/2021	01:55:35	1302188	1	4	1	-0.2%	25800	25746	6800	6967	5992	5987		
BOUGHTON WEIGHBRIDGE	26/01/2021	14:33:55	1314825	1	4	7	-0.3%	17260	17214	5930	5412	3070	2802		
BOUGHTON WEIGHBRIDGE	26/01/2021	15:14:24	1315740	1	5	7	-5.4%	16260	15386	6057	3620	2050	1887	1772	
BOUGHTON WEIGHBRIDGE	27/01/2021	00:59:41	1324084	1	4	5	-2.6%	15180	14783	5377	3247	1272	4887		
BOUGHTON WEIGHBRIDGE	27/01/2021	01:05:11	1324099	1	5	5	-0.5%	15090	15016	5907	3750	1852	1785	1722	
BOUGHTON WEIGHBRIDGE	27/01/2021	08:04:16	1328595	1	5	8	-2.7%	16450	16003	6007	3592	2230	2147	2027	
BOUGHTON WEIGHBRIDGE	27/01/2021	08:46:09	1329823	1	5	8	-1.3%	17460	17226	6272	4505	2127	2242	2080	
BOUGHTON WEIGHBRIDGE	27/01/2021	15:06:27	1337823	1	3	11	-2.0%	15370	15055	6555	4110	4390			
BOUGHTON WEIGHBRIDGE	27/01/2021	16:12:51	1339780	1	5	11	-3.9%	18500	17779	6252	5125	2170	2045	2187	
BOUGHTON WEIGHBRIDGE	28/01/2021	00:34:00	1346439	1	3	8	0.8%	16070	16205	6325	3895	5985			

Weekly Checks

M1 CRICK NB



Some Headline Figures

Circa 130,000,000 vehicles weighed per Year

Circa 400,000 vehicles weighed per Day

Thank you for listening…

Thomas Greene - Sales Manager, Q-Free UK - E: thomas.greene@q-free.com