

National Grid Cable Tunnel Replacement Project

Environmental Statement
Volume VI
Appendix 18.9 Cumulative
Assessment (Gravesham)

Revision 1

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Quality information

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1 Cumulative Assessment (Gravesend)

Table 1: Cumulative Assessment - Peak Construction Phase (2026) AM

Ref	Location	AM Development Peak (07:00-08:00)								AM Network Peak (08:00-09:00)							
		Baseline		Cumulative + PD Dev		Total		% Increase		Baseline		Cumulative + PD Dev		Total		% Increase	
		HG Vs	Total	HGVs	Total	HG Vs	Total	HGVs	Total	HG Vs	Total	HGVs	Total	HGVs	Total	HGVs	Total
G-RL1	A2 (West)	856	10,944	26	72	882	11,016	3.0%	0.7%	955	9,862	3029	5554	985984	9,9179,916	3.1%3.0%	0.6%
G-RL2	M2 (East)	656	8,045	20	34	676	8,080	3.0%	0.4%	712	7,263	2423	3234	736735	7,2957,294	3.4%3.2%	0.4%
G-RL3	A289	333	4,676	60	222	393	4,898	17.9%	4.8%	343	4,204	6866	203201	411409	4,4074,405	19.7%19.1%	4.8%
G-RL4	A226 (between A289 and Peartree Lane)	48	988	38	402	86	1,390	79.2%	40.7%	38	1,011	4644	383384	8482	1,3951,393	121.9%116.5%	37.9%37.7%
G-RL5	A226 (between Peartree Lane and Lion Roundabout)	51	1,011	38	362	89	1,373	74.5%	35.8%	39	1,051	4644	343341	8583	1,3941,392	118.6%113.5%	32.6%32.4%
G-RL6	A226 (between Lion Roundabout and Ordnance Road)	42	917	38	362	80	1,278	89.9%	39.5%	42	1,119	4644	343341	8886	1,4611,459	110.5%105.7%	30.6%30.5%

Ref	Location	AM Development Peak (07:00-08:00)								AM Network Peak (08:00-09:00)							
		Baseline		Cumulative + PD*Dev		Total		% Increase		Baseline		Cumulative + PD*Dev		Total		% Increase	
		HG Vs	Total	HGVs	Total	HG Vs	Total	HGV s	Total	HG Vs	Total	HGVs	Total	HGVs	Total	HGVs	Total
G-RL7	Ordnance Road and Canal Road	48	500	23	121	71	621	48.8 %	24.2 %	53	618	31 29	102 100	84 82	720 718	59.2% 55.4 %	16.5% 16.2 %
G-RL8	Norfolk Road and Mark Lane	43	301	0	27	43	328	0.0 %	9.0 %	48	231	8 6	8 6	56 54	239 237	16.8% 12.6 %	3.5% 2.6 %
G-RL9	Thames and Medway Canal Road	1	93	0	27	1	120	0.0 %	29.1 %	1	51	8 6	8 6	9 7	59 57	784.4% 588.3 %	15.7% 11.8 %
G-RJ1	M2/A2/A28 9 Junction	935	11,630	60	222	994	11,852	6.4 %	1.9 %	1,000	10,431	68 66	203 201	1,067 1,065	10,634 10,632	6.8% 6.6 %	2.0% 1.9 %
G-RJ2	A289/A226 Junction	357	5,170	78	362	435	5,532	21.8 %	7.0 %	362	4,709	86 84	343 341	448 446	5,052 5,050	23.7% 23.2 %	7.3% 7.2 %
G-RJ3	A226/Peartree Lane Signalised Junction	52	1,108	38	362	90	1,470	73.0 %	32.6 %	41	1,203	46 44	343 341	87 85	1,546 1,544	112.7% 107.8 %	28.5% 28.3 %
G-RJ4	A226/Dering Way/ Lower Higham Road/ Old Road East (Lion) Roundabout	100	2,055	38	362	138	2,417	38.0 %	17.6 %	71	2,512	46 44	343 341	117 115	2,855 2,853	64.4% 61.6 %	13.6 %
G-RJ5	A226/Ordnance Road Signalised Junction	85	1,256	44	385	128	1,641	51.8 %	30.7 %	80	1,619	52 50	366 364	131 129	1,985 1,983	65.2% 62.6 %	22.6% 22.5 %

Ref	Location	AM Development Peak (07:00-08:00)								AM Network Peak (08:00-09:00)							
		Baseline		Cumulative + PD*Dev		Total		% Increase		Baseline		Cumulative + PD*Dev		Total		% Increase	
		HG Vs	Total	HGVs	Total	HG Vs	Total	HGV s	Total	HG Vs	Total	HGVs	Total	HGVs	Total	HGVs	Total
G- RJ6	Mark Lane/Thames and Medway Canal Road Junction	20	246	0	27	20	273	0.0 %	11.0 %	30	164	86	86	3836	172170	27.0%20.3 %	4.9%3.6 %

**Proposed Development (arrivals + departures)*

Table 2: Cumulative Assessment - Peak Construction Phase (2026) PM

Ref	Location	PM Network Peak (17:00-18:00)								PM Development Peak (18:00-19:00)								
		Baseline		Cumulative + PDDev		Total		% Increase		Baseline		Cumulative + PDDev		Total		% Increase		
		HGVs	Total	HGVs	Total	HGVs	Total	HGVs	Total	HGVs	Total	HGVs	Total	HGVs	Total	HGVs	Total	
G-RL1	A2 (West)	531	11,561	1244	5453	5435	11,616	2.3%	2.1%	0.5%	460	9,298	9	72	469	9,370	2.0%	0.8%
G-RL2	M2 (East)	499	7,833	76	3130	5055	7,864	1.3%	1.1%	0.4%	374	5,910	4	34	377	5,944	0.9%	0.6%
G-RL3	A289	138	4,444	5250	316344	190488	4,7619	37.6%	36.1%	7.1%	106	3,523	46	337	152	3,861	43.1%	9.6%
G-RL4	A226 (between A289 and Peartree Lane)	21	1,139	6462	534532	8583	1,6734	298.3%	288.9%	46.9%	19	838	58	555	77	1,393	298.7%	66.3%
G-RL5	A226 (between Peartree Lane and Lion Roundabout)	21	1,159	6462	495493	8583	1,6534	298.3%	288.9%	42.7%	20	850	58	516	78	1,365	283.7%	60.7%
G-RL6	A226 (between Lion Roundabout and Ordnance Road)	30	1,188	6462	495493	9492	1,6820	213.0%	206.4%	41.6%	26	989	58	516	84	1,505	219.9%	52.1%
G-RL7	Ordnance Road and Canal Road	20	532	2927	10098	5048	632630	144.2%	134.4%	18.8%	29	445	23	121	52	566	82.0%	27.1%

Ref	Location	PM Network Peak (17:00-18:00)								PM Development Peak (18:00-19:00)							
		Baseline		Cumulative + PDDev		Total		% Increase		Baseline		Cumulative + PDDev		Total		% Increase	
		HGVs	Total	HGVs	Total	HGVs	Total	HGVs	Total	HGVs	Total	HGVs	Total	HGVs	Total	HGVs	Total
G-RL8	Norfolk Road and Mark Lane	17	199	<u>64</u>	<u>64</u>	<u>2324</u>	<u>205203</u>	<u>35.9%</u>	<u>23.9%</u>	16	109	0	27	16	136	0.0%	24.8%
G-RL9	Thames and Medway Canal Road	0	46	<u>64</u>	<u>64</u>	<u>64</u>	<u>5250</u>	-	<u>13.1%</u>	0	31	0	27	0	58	-	88.3%
G-RJ1	M2/A2/A289 Junction	581	11,847	<u>5250</u>	<u>316344</u>	<u>633634</u>	<u>12,16342,464</u>	<u>8.9%</u>	<u>8.6%</u>	454	9,843	46	337	500	10,180	10.1%	3.4%
G-RJ2	A289/A226 Junction	149	5,014	<u>7169</u>	<u>495493</u>	<u>220248</u>	<u>5,5095,507</u>	<u>47.6%</u>	<u>46.2%</u>	116	3,942	65	516	181	4,458	55.8%	13.1%
G-RJ3	A226/Peartree Lane Signalised Junction	23	1,319	<u>6462</u>	<u>495493</u>	<u>8785</u>	<u>1,8131,844</u>	<u>272.3%</u>	<u>263.8%</u>	21	974	58	516	79	1,490	270.2%	52.9%
G-RJ4	A226/Dering Way/ Lower Higham Road/ Old Road East (Lion) Roundabout	49	2,617	<u>6462</u>	<u>495493</u>	<u>11344</u>	<u>3,1113,109</u>	<u>130.5%</u>	<u>126.4%</u>	43	2,231	58	516	101	2,746	135.1%	23.1%
G-RJ5	A226/Ordnance Road Signalised Junction	44	1,514	<u>7068</u>	<u>518546</u>	<u>11344</u>	<u>2,0322,030</u>	<u>159.0%</u>	<u>154.4%</u>	49	1,365	64	539	113	1,905	130.2%	39.5%
G-RJ6	Mark Lane/Thames and Medway Canal Road Junction	14	90	<u>64</u>	<u>64</u>	<u>2048</u>	<u>9694</u>	<u>43.9%</u>	<u>29.3%</u>	14	65	0	27	14	92	0.0%	41.5%

**Proposed Development (arrivals + departures)*

Table 3: Cumulative Assessment - Peak Construction Phase (2026) 12 Hours / 24hr Daily

Ref	Location	12 Hours (07:00-19:00)								24hr Daily							
		Baseline		Cumulative + PD*Dev		Total		% Increase		Baseline		Cumulative + PD*Dev		Total		% Increase	
		HG Vs	Total	HGVs	Total	HGVs	Total	HGVs	Total	HG Vs	Total	HGVs	Total	HGVs	Total	HGVs	Total
G-RL 1	A2 (West)	10,156	111,303	<u>1814</u> <u>73</u>	<u>53552</u> <u>7</u>	<u>10,3374</u> <u>0,329</u>	<u>111,8384</u> <u>11,830</u>	<u>1.8%</u> <u>1.7%</u>	0.5%	9,926	130,414	<u>1814</u> <u>73</u>	<u>535527</u>	<u>10,1074</u> <u>0,099</u>	<u>130,9504</u> <u>30,942</u>	<u>1.8%</u> <u>1.7%</u>	0.4%
G-RL 2	M2 (East)	8,272	80,828	<u>1424</u> <u>34</u>	<u>35034</u> <u>2</u>	<u>8,4148</u> <u>406</u>	<u>81,17884</u> <u>,170</u>	<u>1.7%</u> <u>1.6%</u>	0.4%	9,679	99,758	<u>1424</u> <u>34</u>	<u>350342</u>	<u>9,8219</u> <u>813</u>	<u>100,1094</u> <u>00,104</u>	<u>1.5%</u> <u>1.4%</u>	0.3%
G-RL 3	A289	3,406	44,834	<u>3983</u> <u>82</u>	<u>1,2734</u> <u>,257</u>	<u>3,8043</u> <u>788</u>	<u>46,10746</u> <u>,094</u>	<u>11.7%</u> <u>11.2%</u>	2.8%	3,532	50,160	<u>3983</u> <u>82</u>	<u>1,2734</u> <u>,257</u>	<u>3,9313</u> <u>915</u>	<u>51,43354</u> <u>,417</u>	<u>11.3%</u> <u>10.8%</u>	2.5%
G-RL 4	A226 (between A289 and Peartree Lane)	458	11,080	<u>7307</u> <u>14</u>	<u>3,8483</u> <u>,832</u>	<u>1,1884</u> <u>172</u>	<u>14,92844</u> <u>,912</u>	<u>159.2%</u> <u>55.7%</u>	<u>34.7%</u> <u>4.6%</u>	465	13,347	<u>7307</u> <u>14</u>	<u>3,8483</u> <u>832</u>	<u>1,1954</u> <u>179</u>	<u>17,19417</u> <u>,178</u>	<u>156.9%</u> <u>53.4%</u>	<u>28.8%</u> <u>8.7%</u>
G-RL 5	A226 (between Peartree Lane and Lion Roundabout)	477	11,344	<u>7307</u> <u>14</u>	<u>3,8483</u> <u>,832</u>	<u>1,2074</u> <u>194</u>	<u>15,19245</u> <u>,176</u>	<u>153.0%</u> <u>49.6%</u>	<u>33.9%</u> <u>3.8%</u>	484	13,665	<u>7307</u> <u>14</u>	<u>3,8483</u> <u>832</u>	<u>1,2144</u> <u>198</u>	<u>17,51247</u> <u>,496</u>	<u>150.8%</u> <u>47.5%</u>	<u>28.2%</u> <u>8.0%</u>
G-RL 6	A226 (between Lion Roundabout and Ordnance Road)	508	11,738	<u>7307</u> <u>14</u>	<u>3,8483</u> <u>,832</u>	<u>1,2384</u> <u>222</u>	<u>15,58645</u> <u>,570</u>	<u>143.6%</u> <u>40.5%</u>	<u>32.8%</u> <u>2.6%</u>	515	14,139	<u>7307</u> <u>14</u>	<u>3,8483</u> <u>832</u>	<u>1,2454</u> <u>229</u>	<u>17,98747</u> <u>,974</u>	<u>141.6%</u> <u>38.5%</u>	<u>27.2%</u> <u>7.1%</u>
G-RL 7	Ordnance Road and	605	7,122	<u>2362</u> <u>20</u>	<u>75974</u> <u>3</u>	<u>841825</u>	<u>7,8817,8</u> <u>65</u>	<u>39.0%</u> <u>36.4%</u>	<u>10.7%</u> <u>0.4%</u>	549	6,757	<u>2362</u> <u>20</u>	<u>759743</u>	<u>785769</u>	<u>7,5167,5</u> <u>00</u>	<u>43.0%</u> <u>40.0%</u>	<u>11.2%</u> <u>4.0%</u>

Ref	Location	12 Hours (07:00-19:00)								24hr Daily							
		Baseline		Cumulative + PD*Dev		Total		% Increase		Baseline		Cumulative + PD*Dev		Total		% Increase	
		HG Vs	Total	HGVs	Total	HGVs	Total	HGVs	Total	HG Vs	Total	HGVs	Total	HGVs	Total	HGVs	Total
	Canal Road																
G-RL 8	Norfolk Road and Mark Lane	499	2,856	8064	134118	579563	2,9902,974	16.0% -8%	4.7% 4.4%	454	2,709	8064	134118	534518	2,8432,827	17.6% -1%	4.9% 4%
G-RL 9	Thames and Medway Canal Road	12	634	8064	134118	9276	768752	653.5% 22.8%	21.1% 8.6%	10	649	8064	134118	9074	783767	784.4% 27.5%	20.7% 8.2%
G-RJ1	M2/A2/A 289 Junction	10,674	117,936	398382	1,2731,257	11,0731,057	119,2091,193	3.7% 3.6%	1.1%	11,278	139,330	398382	1,2731,257	11,6771,664	140,6031,40,587	3.5% 3.4%	0.9%
G-RJ2	A289/A2 26 Junction	3,635	50,374	934948	3,8483,832	4,5694,553	54,22254,206	25.7% -2%	7.6%	3,765	56,834	934948	3,8483,832	4,6984,682	60,68160,665	24.8% -4%	6.8% 6.7%
G-RJ3	A226/Peartree Lane Signalised Junction	499	12,830	730744	3,8483,832	1,2291,213	16,67716,661	146.2% 43.0%	29.99% 29.9%	506	15,454	730744	3,8483,832	1,2361,220	19,30219,286	144.1% 40.9%	24.9% 4.8%
G-RJ4	A226/Dering Way/ Lower Higham Road/ Old Road East (Lion)	954	26,236	730744	3,8483,832	1,6841,668	30,08430,068	76.5% -8%	14.7% 4.6%	968	31,603	730744	3,8483,832	1,6981,682	35,45135,435	75.4% -7%	12.2% 2.1%

Ref	Location	12 Hours (07:00-19:00)								24hr Daily							
		Baseline		Cumulative + <u>PD*Dev</u>		Total		% Increase		Baseline		Cumulative + <u>PD*Dev</u>		Total		% Increase	
		HG Vs	Tota l	HGV s	Total	HGVs	Total	HGVs	Total	HG Vs	Tota l	HGV s	Total	HGVs	Total	HGVs	Total
	Roundabout																
G-RJ5	A226/Ordinance Road Signalised Junction	932	16,037	<u>769</u> 753	<u>4,004</u> 3,988	<u>1,700</u> 1,684	<u>20,040</u> 20,024	<u>82.5%</u> 80.8%	<u>25.0%</u> 24.9%	945	19,317	<u>769</u> 753	<u>4,004</u> 3,988	<u>1,714</u> 1,698	<u>23,321</u> 23,305	<u>81.3%</u> 79.6%	<u>20.7%</u> 20.6%
G-RJ6	Mark Lane/Thames and Medway Canal Road Junction	279	1,703	<u>80</u> 64	<u>134</u> 118	<u>359</u> 343	<u>1,837</u> 1,821	<u>28.7%</u> 22.9%	<u>7.9%</u> 6.9%	232	1,677	<u>80</u> 64	<u>134</u> 118	<u>312</u> 296	<u>1,811</u> 1,795	<u>34.5%</u> 27.6%	<u>8.0%</u> 7.0%

*Proposed Development (arrivals + departures)