

# M20 Junction 10a

TR010006

## Appendix 12.4 Driver Stress (Alternative Scheme)

APFP Regulation 5(2)(q)

Revision A

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure)

Regulations 2009



**Volume 6.3**  
July 2016



M20 Junction 10a

TR010006

# **Appendix 12.4 Driver Stress (Alternative Scheme)**

Volume 6.3



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# 1. Driver Stress (Alternative Scheme)

- 1.1.1 To accord with DMRB Volume 11, Section 3, Part 9, a 3 point descriptive scale (Low, Moderate or High) has been used to describe Driver Stress in line with the methodology described within Sections 12.3.6 to 12.3.13 of Chapter 12 Effects on All Travellers, Volume 6.1, and Appendix 12.1, Volume 6.3. All routes included within the traffic model that are located within 250m of the Alternative Scheme are presented below in Table 1.1. The traffic data that has been presented is for the Design Year (2033), for the Do Minimum (DM) (without Scheme) and Do Something (DS) (with Scheme) scenarios.
- 1.1.2 Flow Units are calculated as follows:
- A car or light van equals one flow unit.
  - A commercial vehicle over 1½ tons unladen weight or a public service vehicle equals 3 flow units.



Table 1.1 Operational Driver Stress for Affected routes within 250m of the Alternative Scheme

Link ID (as referenced within the traffic model)	Driver Stress 2033 Road Description	Single / Dual Carriageway	2033 Percentage Change in AADT Traffic Flows (%)	Average flow (flow units/hr) DM per lane	Average flow (flow units/hr) DS per lane	Speed (km/hr) DM	Speed (km/hr) DS	Driver Stress DM (without Scheme)	Driver Stress DS (with Scheme)
1028-1030	M20 eastbound opposite Willesborough Industrial Park.	Motorway	4.34	1275	1359	52	82	High	Moderate
1029-1027	M20 westbound (between Lees Road and Hythe Road offset).	Motorway	26.87	665	820	114	113	Low	Low
1030-1032	M20 eastbound junction 10 slipway north.	Dual Carriageway	-12.79	844	750	25	25	High	High
1030-1042	M20 eastbound under junction 10.	Motorway	19.94	696	859	112	111	Low	Low
1032-1033	Junction 10 gyratory north (between slipway and A2070).	Dual Carriageway	-29.03	1646	1169	18	18	High	High
1033-1058	Junction 10 gyratory north (opposite A2070).	Dual Carriageway	-36.65	1306	833	11	13	High	High
1033-1059	Junction 10 gyratory north (A2070 west turning).	Dual Carriageway	1.57	340	335	39	39	High	High
1034-1060	Junction 10 gyratory east (opposite A20).	Dual Carriageway	-22.19	1223	955	10	11	High	High
1034-1063	Junction 10 gyratory (A20 turning).	Dual Carriageway	-43.33	396	192	34	37	High	High
1035-1036	Junction 10 gyratory south east (SB bridge).	Dual Carriageway	-24.19	1543	1158	19	48	High	High
1035-1042	M20 junction 10 eastbound slipway south.	Dual Carriageway	Removed	284	DM Only	65	DM Only	Moderate	N/A
1036-1037	Junction 10 gyratory south (between A2070 and southbound bridge).	Dual Carriageway	-36.52	1874	1158	23	23	High	High
1037-1039	Junction 10 gyratory south (opposite A2070).	Dual Carriageway	-51.53	519	245	6	6	High	High
1037-1064	A2070 junction 10 gyratory turning southbound.	Dual Carriageway	-30.33	1355	913	23	33	High	High
1038-1039	A2070 junction 10 gyratory turning northbound.	Dual Carriageway	-17.58	1147	999	9	9	High	High
1038-4140	A2070 southbound (opposite Evans Road).	Dual Carriageway	-30.33	1355	913	54	54	High	High
1039-1057	Junction 10 gyratory west (between A2070 and A292).	Dual Carriageway	-27.97	1666	1244	23	23	High	High
1040-1032	Junction 10 gyratory north bound (northbound bridge)	Dual Carriageway	-44.91	801	419	7	9	High	High
1041-1029	M20 westbound under junction 10.	Motorway	26.87	665	820	114	113	Low	Low
1041-1036	M20 junction 10 westbound slip road south.	Dual Carriageway	Removed	332	DM Only	17	DM Only	High	N/A
1042-8888	M20 opposite superstore.	Motorway	-9.67	886	859	110	108	Low	Low
1043-50193	M20 under proposed junction 10a westbound.	Motorway	-26.42	887	663	108	97	Low	Low
1043-50198	M20 westbound proposed junction 10a slipway south.	Dual Carriageway	New	DS only	361	DS only	35	N/A	High
1044-1046	M20 eastbound (Between proposed junction 10 slipway and just before The Street).	Motorway	Removed	886	DM only	112	DM only	Low	N/A

Link ID (as referenced within the traffic model)	Driver Stress 2033 Road Description	Single / Dual Carriageway	2033 Percentage Change in AADT Traffic Flows (%)	Average flow (flow units/hr) DM per lane	Average flow (flow units/hr) DS per lane	Speed (km/hr) DM	Speed (km/hr) DS	Driver Stress DM (without Scheme)	Driver Stress DS (with Scheme)
1044-1111	M20 eastbound just bore proposed south slipway.	Motorway	New	DS only	895	DS only	109	N/A	Low
1045-1043	M20 westbound (Between proposed junction 10 slipway and just before The Street).	Motorway	3.34	887	903	116	116	Low	Low
1057-1040	Junction 10 gyratory west (opposite A292).	Dual Carriageway	-58.05	567	238	9	11	High	High
1057-4800	Junction 10 gyratory west A292 turning.	Dual Carriageway	-14.29	1099	1006	47	47	High	High
1058-1034	Junction 10 gyratory north (between A2020 and A20).	Dual Carriageway	-27.38	1619	1147	17	17	High	High
1059-1058	Junction 10 gyratory north A2070 turning east.	Single	0.86	627	629	9	9	High	High
1059-3280	A2070 north (opposite Lacton Oast).	Single	1.57	680	671	41	41	High	High
1060-1035	Junction 10 gyratory east. (between A20 and slipway)	Dual Carriageway	-36.89	1827	1158	33	33	High	High
1061-1060	Junction 10 gyratory east (A20 south turning).	Dual Carriageway	-69.52	604	203	12	14	High	High
1061-8010	A20 opposite superstore.	Single	-43.33	792	384	40	40	High	High
1063-1061	A20 junction 10 gyratory turning.	Dual Carriageway	-43.32	396	192	76	76	Moderate	Moderate
1064-1038	A2070 (opposite Nelson Close).	Dual Carriageway	-30.33	1355	913	54	54	High	High
1111-1046	M20 eastbound (Between proposed junction 10 slipway and just before The Street).	Motorway	New	DS only	1342	DS only	106	N/A	Moderate
2222-1041	M20 westbound (just before slipway).	Motorway	New	DS only	1230	DS only	107	N/A	Moderate
3230-3260	A2070 Willesborough Lees (Opposite hospital).	Single	0.01	569	559	31	32	High	High
3260-3230	A2070 Willesborough Lees (Opposite hospital)	Single	5.02	513	510	40	41	High	High
3260-3261	Yeoman Gardens.	Single	0.46	31	32	21	21	High	High
3260-3262	William Harvey Hospital turning.	Single	0.38	78	79	33	33	High	High
3260-3270	A2070 Willesborough Lees (between Yeoman Gardens and The Street).	Single	0.17	680	672	11	14	High	High
3261-3260	Yeoman Gardens.	Single	0.04	49	49	8	8	High	High
3262-3260	William Harvey Hospital turning.	Single	0.03	146	146	26	27	High	High
3270-3260	A2070 Willesborough Lees (between Yeoman Gardens and The Street).	Single	5.09	539	539	31	31	High	High
3270-3271	The Street (between A2070 and Lacton Cast).	Single	-8.73	172	165	34	34	High	High
3270-3280	A2070 Willesborough Lees (just south of the Street).	Single	0.86	627	629	41	41	High	High
3271-3270	The Street (between A2070 and Lacton Cast).	Single	-3.53	20	19	25	25	High	High
3271-9215	The Street (just south of William Harvey hospital (northbound side)).	Single	-10.41	153	144	40	40	High	High

Link ID (as referenced within the traffic model)	Driver Stress 2033 Road Description	Single / Dual Carriageway	2033 Percentage Change in AADT Traffic Flows (%)	Average flow (flow units/hr) DM per lane	Average flow (flow units/hr) DS per lane	Speed (km/hr) DM	Speed (km/hr) DS	Driver Stress DM (without Scheme)	Driver Stress DS (with Scheme)
3271-9220	The Street (southbound split opposite Lacton Oast).	Single	1.07	24	24	30	30	High	High
3280-1059	A2070 Willesborough Lees (just north of M20 junction 10).	Single	0.86	627	629	27	27	High	High
3280-3270	A2070 Willesborough Lees (just south of The Street).	Single	1.57	680	671	15	17	High	High
4095-4105	Bad Munstereifel Road (opposite Church Road northbound).	Dual Carriageway	3.15	1154	1234	29	44	High	High
4100-61001	Bad Munstereifel Road (south of Church Road southbound).	Dual Carriageway	16.81	1121	1292	64	64	Moderate	Moderate
4105-4100	Bad Munstereifel Road (opposite Church Road southbound).	Dual Carriageway	16.81	1121	1292	56	56	High	High
4105-4106	Church Road (just east of the A2070).	Single	-72.68	494	83	35	44	High	High
4105-4115	Bad Munstereifel Road northbound (opposite Church Road).	Dual Carriageway	4.37	1128	1229	46	46	High	High
4106-4105	Church Road (just east of the A2070).	Single	-45.25	42	4	2	2	High	High
4106-50206	New Link (between Church Road and Sevington north east direction).	Single	New	DS only	7	DS only	28	N/A	High
4106-50500	New link (between Church Road and Sevington east bound direction).	Single	New	DS only	78	DS only	37	N/A	High
4106-9505	Church Road (toward Maytree Cottages).	Single	Removed	198	DM only	40	DM only	High	N/A
4106-9509	Lane for St Marys Church Sevington.	Single	Removed	452	DM only	25	DM only	High	N/A
4110-4105	Bad Munstereifel Road southbound opposite Church Road.	Dual Carriageway	3.14	1322	1330	58	39	High	High
4115-4117	Bad Munstereifel northbound (just south of Barrey Road).	Dual Carriageway	4.37	1128	1229	46	46	High	High
4117-4110	Bad Munstereifel southbound (just south of Barrey Road).	Dual Carriageway	3.14	1322	1330	58	58	High	High
4117-4118	Barrey Road.	Single	0.40	141	142	25	25	High	High
4117-4125	Bad Munstereifel Road northbound (just north of Barrey Road).	Dual Carriageway	3.33	1147	1228	44	44	High	High
4118-4117	Barrey Road.	Single	-0.15	113	113	3	2	High	High
4120-4117	Bad Munstereifel Road southbound (just north of Barrey Road).	Dual Carriageway	2.66	1355	1356	36	39	High	High
4125-4135	Bad Munstereifel Road northbound (Opposite Kingfisher Close).	Dual Carriageway	Removed	1147	DM only	44	DM only	High	N/A
4125-51001	New link A2070 link road opposite St Marys Church Sevington.	Dual Carriageway	New	DS only	1228	DS only	64	N/A	Moderate
4130-4120	Bad Munstereifel opposite Kingfisher Close southbound.	Dual Carriageway	Removed	1355	DM only	54	DM only	High	N/A
4130-51002	New link (East of Bad Munstereifel).	Dual Carriageway	New	DS only	913	DS only	64	N/A	Moderate

Link ID (as referenced within the traffic model)	Driver Stress 2033 Road Description	Single / Dual Carriageway	2033 Percentage Change in AADT Traffic Flows (%)	Average flow (flow units/hr) DM per lane	Average flow (flow units/hr) DS per lane	Speed (km/hr) DM	Speed (km/hr) DS	Driver Stress DM (without Scheme)	Driver Stress DS (with Scheme)
4135-4145	Bad Munstereifel northbound (between proposed new roundabout and junction 10).	Dual Carriageway	-17.58	1147	999	44	44	High	High
4140-4130	Bad Munstereifel southbound (between proposed new roundabout and junction 10).	Dual Carriageway	-30.33	1355	913	54	54	High	High
4145-1038	Bad Munstereifel northbound (just south of junction 10).	Dual Carriageway	-17.58	1147	999	44	44	High	High
4800-1040	Junction 10 gyratory Hythe road A292 northbound turning.	Dual Carriageway	-17.00	234	181	7	8	High	High
4800-4805	Hythe Road A292 (opposite The Street).	Dual Carriageway	-14.29	1099	1006	47	47	High	High
4805-4800	Hythe Road A292 (opposite The Street).	Dual Carriageway	-17.00	468	361	38	38	High	High
4805-4810	Hythe Road A292 opposite Wickenden Crescent.	Dual Carriageway	-14.29	1099	1006	14	33	High	High
4810-4805	Hythe Road A292 opposite Wickenden Crescent.	Dual Carriageway	-16.99	468	361	40	40	High	High
50020-50021	Bockham Lane.	Single	-24.58	92	79	41	41	High	High
50021-50020	Bockham Lane.	Single	14.55	342	377	45	44	High	High
50021-50194	A20 Hythe Road (just west of Bockham Lane).	Single	9.22	637	707	65	63	Moderate	Moderate
50021-8030	A20 Hythe Road (east of Bockham Lane until the Street turning).	Single	-2.97	474	469	75	74	Low	Low
50079-50080	Hospice turning (off A20).	Single	65.90	19	42	25	25	High	High
50079-61013	A20 Hythe Road (opposite Hospice).	Single	-85.38	704	72	39	24	High	High
50079-8013	A20 Hythe Road between Hospice and proposed junction 10a.	Single	-18.06	771	543	63	23	Moderate	High
50080-50079	Hospice turning (off A20).	Single	188.68	19	88	8	11	High	High
50192-1044	M20 underneath proposed M20 junction 10a.	Motorway	-25.81	886	683	107	97	Low	Low
50192-50196	New link Proposed junction 10a (garden centre link westbound).	Dual Carriageway	New	DS only	264	DS only	40	N/A	High
50193-1041	New link M20 underneath junction 10a.	Motorway	Removed	887	DM only	108	Dm only	Low	N/A
50193-2222	New link for southern junction 10a slipway.	Dual Carriageway	New	DS only	1230	DS only	109	N/A	Moderate
50194-50021	A20 Hythe Road (just west of Bockham lane).	Single	3.44	715	747	63	63	Moderate	Moderate
50194-8020	A20 Hythe Road east of Highfield Lane.	Single	9.22	637	707	65	28	Moderate	High
50195-50193	New link junction 10a slip road southbound west.	Dual Carriageway	New	DS only	237	DS only	88	N/A	Low
50195-50196	New link junction 10a gyratory parallel to Highfield Line West.	Dual Carriageway	New	DS only	373	DS only	23	N/A	High
50196-8013	New link junction 10a gyratory A20 link.	Dual Carriageway	New	DS only	637	DS only	64	N/A	Moderate

Link ID (as referenced within the traffic model)	Driver Stress 2033 Road Description	Single / Dual Carriageway	2033 Percentage Change in AADT Traffic Flows (%)	Average flow (flow units/hr) DM per lane	Average flow (flow units/hr) DS per lane	Speed (km/hr) DM	Speed (km/hr) DS	Driver Stress DM (without Scheme)	Driver Stress DS (with Scheme)
50197-1044	New link junction 10a gyratory slip road northbound east.	Dual Carriageway	New	DS only	318	DS only	87	N/A	Low
50197-50198	New link junction 10a gyratory parallel to Highfield Line East.	Dual Carriageway	New	DS only	518	DS only	17	N/A	High
50198-50205	New link junction 10a gyratory southbound between proposed A2070 link and M20 southbound slipway.	Dual Carriageway	New	DS only	879	DS only	64	N/A	Moderate
50202-51001	New link A2070 Junction / roundabout.	Dual Carriageway	New	DS only	875	DS only	64	N/A	Moderate
50202-51002	New link A2070 Junction / roundabout	Dual Carriageway	New	DS only	192	DS only	31	N/A	High
50202-51003	New link A2070 Junction / roundabout.	Dual Carriageway	New	DS only	432	DS only	64	N/A	Moderate
50203-50205	New link A2070 Highfield / Nursery	Dual Carriageway	New	DS only	400	DS only	54	N/A	High
50203-51003	New link A2070 east of junction / roundabout.	Dual Carriageway	New	DS only	653	DS only	64	N/A	Moderate
50205-50195	New link junction 10a gyratory between A2070 and M20 slipway westbound south.	Dual Carriageway	New	DS only	609	DS only	64	N/A	Moderate
50205-50203	New link A2070 west of junction 10a.	Dual Carriageway	New	DS only	670	DS only	51	N/A	High
50206-4106	New link road lane toward St Marys Church Sevington.	Single	New	DS only	4	DS only	29	N/A	High
50206-50207	New link road lane toward St Marys Church Sevington.	Single	New	DS only	141	DS only	25	N/A	High
50207-50206	New link road lane toward St Marys Church Sevington.	Single	New	DS only	89	DS only	25	N/A	High
50500-4106	Church Road toward Maytree Cottages.	Single	New	DS only	2	DS only!	37	N/A	High
50501-9500	Highfield lane (south of proposed junction 10a).	Single	New	DS only	0	DS only	46	N/A	High
51001-4120	New link road A2070 just to the north of St Marys Church Sevington.	Dual Carriageway	New	DS only!	1356	DS only	64	N/A	Moderate
51001-51002	New link road A2070 just to the north of St Marys Church Sevington.	Dual Carriageway	New	DS only	422	DS only	22	N/A	High
51002-4135	New link A2070 roundabout / junction.	Dual Carriageway	New	DS only!	999	DS only	64	N/A	Moderate
51002-50202	New link A2070 roundabout / junction.	Dual Carriageway	New	DS only	913	DS only	11	N/A	High
51003-50202	New link A2070 roundabout / junction.	Dual Carriageway	New	DS only	172	DS only	16	N/A	High
51003-50203	New link A2070 east of junction / roundabout.	Dual Carriageway	New	DS only	432	DS only	51	N/A	Moderate
51003-51001	New link A2070 roundabout / junction.	Dual Carriageway	New	DS only	481	DS only	64	N/A	Moderate
60101-9500	West of Highfield Lane Nursery	Single	0	47	0	25	25	High	High



Link ID (as referenced within the traffic model)	Driver Stress 2033 Road Description	Single / Dual Carriageway	2033 Percentage Change in AADT Traffic Flows (%)	Average flow (flow units/hr) DM per lane	Average flow (flow units/hr) DS per lane	Speed (km/hr) DM	Speed (km/hr) DS	Driver Stress DM (without Scheme)	Driver Stress DS (with Scheme)
61000-4095	Bad Munstereifel Road northbound south of Church Road junction.	Dual Carriageway	3.15	1154	1234	64	64	Moderate	Moderate
61001-61004	Bad Munstereifel Road southbound adjacent to the channel tunnel railway.	Dual Carriageway	16.81	1121	1292	64	64	Moderate	Moderate
61004-61000	Bad Munstereifel Road northbound adjacent to the channel tunnel railway.	Dual Carriageway	3.15	1154	1234	64	64	Moderate	Moderate
61010-61013	Off A20 opposite 'The Warren'.	Single	-47.26	138	73	4	4	High	High
61011-9215	The Street 'Lacton Green'.	Single	2.79	364	356	57	57	Moderate	Moderate
61013-50079	A20 Hythe Road (opposite the Hospice).	Single	-28.98	752	464	84	90	Moderate	Low
61013-61010	Off A20 opposite 'The Warren'.	Single	-16.92	118	97	25	25	High	High
61013-8015	A20 Hythe Road between Tesco superstore and The Warren.	Single	-90.41	788	50	83	94	Moderate	Low
8010-1061	A20 Hythe Road junction 10 gyratory to superstore.	Single	-69.52	1209	406	32	32	High	High
8010-8011	Tesco superstore.	Single	0.14	62	63	25	25	High	High
8010-8015	A20 Hythe Road east of Tesco superstore.	Single	-34.68	816	466	33	33	High	High
8011-8010	Tesco superstore.	Single	-0.05	129	129	10	10	High	High
8012-8010	The street (opposite superstore).	Single	3.06	378	372	25	27	High	High
8012-9220	The Street Lacton Green (opposite Lacton Oast).	Single	-12.66	3	2	30	30	High	High
8013-50079	A20 Hythe Road (between Hospice and Garden Centre).	Single	-79.36	722	104	61	55	Moderate	Moderate
8013-8020	A20 Hythe Road (between Garden Centre and Highfield Lane).	Single	121.30	771	1712	51	49	Moderate	High
8015-61013	A20 Hythe Road (opposite superstore).	Single	-34.68	816	466	17	23	High	High
8015-8010	A20 Hythe Road east of superstore roundabout.	Single	-90.41	788	50	16	20	High	High
8020-50194	A20 Hythe Road (east of Highfield Lane).	Single	3.44	715	747	63	63	Moderate	Moderate
8020-50197	New link junction 10a gyratory NB between northbound east slipway and Hythe Road.	Dual Carriageway	New	DS only	836	DS only	64	N/A	Moderate
8020-8013	New link junction 10a gyratory Hythe Road.	Single	Removed	722	DM only	64	DM only	Moderate	N/A
8020-9500	New Link Highfield Lane.	Single	Removed	119	DM only	35	DM only	High	N/A
8030-50021	A20 east of Bockham Lane until Hatch Lodge.	Single	10.63	647	727	67	66	Moderate	Moderate
8888-50192	M20 southbound (between superstore and Garden Centre).	Motorway	-9.67	886	859	107	108	Low	Low
9215-3271	The Street Lacton Green opposite the hospital.	Single	-4.25	16	15	24	24	High	High
9215-61011	The Street Lacton Green opposite the hospital.	Single	-10.41	153	144	57	57	Moderate	Moderate
9215-8012	The Street Lacton Green.	Single	3.40	348	341	24	24	High	High

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9220-3271	The Street (opposite Lacton Oast).	Single	-1.41	8	8	22	22	High	High
9220-8012	The Street (opposite Lacton Oast).	Single	-0.15	33	33	26	26	High	High
9220-9230	Lacton Oast.	Single	0.54	26	26	26	26	High	High
9230-9220	Lacton Oast.	Single	-0.04	41	41	18	18	High	High
9500-50501	Highfield lane (south of proposed junction 10a).	Single	New	DS only	0	DS only	46	N/A	High
9500-60101	West of Highfield Lane- Nursery	Single	-100.00	95	0	40	40	High	High
9500-8020	Highfield Bridge.	Single	Removed	148	DM only	10	DM only	High	N/A
9500-9501	Highfield Lane to Kingsford Street.	Single	Removed	5	0	40	38	High	High
9500-9505	Highfield Lane (proposed junction 10a towards the south).	Single	Removed	32	DM only	35	DM only	High	N/A
9501-9500	Highfield Lane to Kingsford Street.	Single	Removed	0	0	55	57	N/A	N/A
9505-4106	Church Lane (east of Court Lodge).	Single	Removed	45	DM only	37	DM only	N/A	N/A
9505-9500	Highfield Lane (proposed junction 10a towards the south).	Single	Removed	114	DM only	39	DM only	N/A	N/A
9509-4106	Lane towards St Marys Church, Sevington.	Single	Removed	153	DM only	24	DM only	N/A	N/A