

## Appendix E. Forecast Metrics

Appendix E provides the forecast values of the metrics which will be monitored for the PWD and will be used to compare with the outturn data at the time of actual monitoring and evaluation stage in the future. The opening year and design year information are provided and will be used to interpolate the data for the 5 year after scenario, given that there is no forecast model for the 5 year after opening situation.

The journey time reliability has not been provided for the forecast metrics since the methodology described in section 6.3.3 to calculate the journey time variability cannot be applied to the modelled journey times, as the forecast model only produces average journey time. Therefore, a 95th percentile journey time, average JT and standard deviation will be calculated using baseline and post-opening years Trafficmaster data and will be used in the reliability formula. The outcome will be compared with each other to determine whether the scheme has successfully improved the JT reliability.





Forecast Journey Times

\* Please refer to Section 6.3.3 (Travel Time and Reliability) for more information.

Route	Direction	Distances (m)	Scenario	Journey Time (sec)						Journey Time (sec) per mile							
				2022		2022		2037		2022		2022		2037		2037	
				2022			2037			2022			2037				
				AM	IP	PM	AM	IP	PM	AM	IP	PM	AM	IP	PM		
Route 1	Southbound	27	DS	1,466	1,416	1,530	1,542	1,449	1,479	55	53	57	58	54	56		
	Northbound	25	DS	1,375	1,339	1,467	1,448	1,398	1,504	55	54	59	58	56	60		
Route 2	Eastbound	15	DS	1,144	1,115	1,286	1,201	1,155	1,387	75	73	84	78	75	91		
	Westbound	15	DS	1,283	1,164	1,263	1,317	1,198	1,300	84	76	82	86	78	85		
Route 3	Eastbound	11	DS	479	465	538	486	470	558	44	42	49	44	43	51		
	Westbound	11	DS	536	484	524	552	490	535	48	44	47	50	44	48		
Route 4	Eastbound	25	DS	567	540	581	602	563	643	23	22	23	24	23	26		
	Westbound	26	DS	562	516	559	597	537	594	22	20	22	23	21	23		
Route 5	Southbound	77	DS	1,713	1,693	1,933	1,825	1,805	2,118	22	22	25	24	24	28		
	Northbound	77	DS	1,912	1,686	1,831	2,167	1,809	2,056	25	22	24	28	23	27		
Route 6	Southbound	13	DS	1,049	1,018	1,117	1,088	1,053	1,179	78	76	84	81	79	88		
	Northbound	14	DS	1,110	1,086	1,214	1,163	1,167	1,322	81	80	89	85	86	97		
Route 7	Southbound	23	DS	1,571	1,428	1,623	1,674	1,493	1,791	69	63	72	74	66	79		
	Northbound	21	DS	1,550	1,375	1,549	1,643	1,437	1,576	73	65	73	78	68	75		
Route 8	Southbound	26	DS	1,373	1,343	1,387	1,439	1,362	1,472	52	64	66	68	65	70		
	Northbound	26	DS	1,377	1,329	1,392	1,440	1,366	1,485	52	50	53	55	52	56		
Route 9	Southbound	28	DS	1,177	1,119	1,360	1,265	1,164	1,451	43	41	49	46	42	53		
	Northbound	28	DS	1,253	1,141	1,330	1,373	1,214	1,386	45	41	48	49	44	50		

Forecast CO2 Emissions

\* Please refer to Section 6.3.5 (Impact on Carbon) for more information.

	Non-traded CO2 Emission (tonnes)								
	2022	2023	2024	2025	2026	2027	2028	2029	2030
Do Something	154,629	156,052	157,476	158,899	160,323	161,746	163,170	164,594	166,017



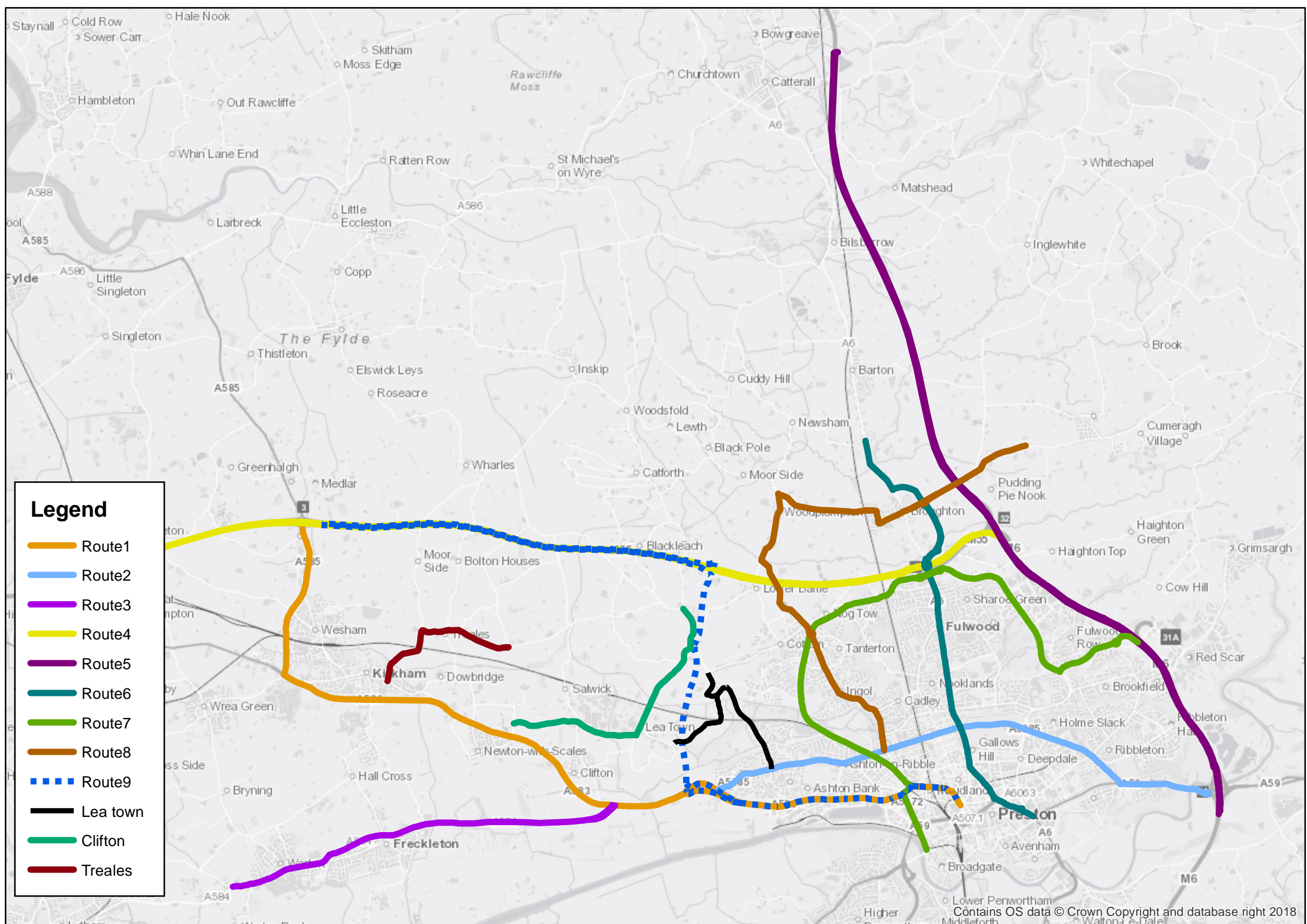
Forecast number of Accidents

\* Please refer to Section 6.3.8 (Impact on Accidents) for more information.

\*\*Accident/Casualty Routes are shown in the map in the next page.

Route	Number of Accidents	
	2022 With Scheme	2037 With Scheme
Route 1	8.1	7.4
Route 2	24.3	21.4
Route 3	7.1	6.1
Route 4	13.8	13.2
Route 5	21.4	19.4
Route 6	14	12.9
Route 7	7.6	6.1
Route 8	7.4	7.5
Route 9	11	10.6
Lea Town	1.7	1.7
Clifton	0.9	0.8
Treales	0.1	0.1

Route	Number of Casualties					
	2022 With Scheme			2037 With Scheme		
	Fatal	Serious	Slight	Fatal	Serious	Slight
Route 1	0.26	1.60	10.20	0.24	1.49	9.49
Route 2	0.22	3.24	29.33	0.20	2.82	25.46
Route 3	0.13	0.94	8.64	0.12	0.84	7.69
Route 4	0.23	1.43	20.50	0.22	1.36	19.53
Route 5	0.36	2.23	31.87	0.33	2.03	29.08
Route 6	0.17	2.14	16.45	0.15	1.92	14.74
Route 7	0.06	1.02	8.20	0.05	0.89	7.12
Route 8	0.06	1.09	8.13	0.06	1.07	8.01
Route 9	0.20	1.35	15.62	0.19	1.30	15.07
Lea Town	0.01	0.25	1.98	0.01	0.23	1.86
Clifton	0.02	0.18	1.28	0.01	0.15	1.05
Treales	0.00	0.03	0.17	0.00	0.02	0.13



**Legend**

- Route1
- Route2
- Route3
- Route4
- Route5
- Route6
- Route7
- Route8
- Route9
- Lea town
- Clifton
- Treales

Forecast Impact on Air Quality

\* Please refer to Section 6.3.7 (Impact on Local Air Quality) for more information.

	2022	2037
<b>NOx emissions (tonnes)</b>	<b>440</b>	<b>264</b>



Forecast Impact on Noise

\* Please refer to Section 6.3.6 (Impact on Noise) for more information.

<b>Change in Noise</b>	<b>HH</b>
Households experiencing increased daytime noise in forecast year	2,276
Households experiencing reduced daytime noise in forecast year	3,449
Households experiencing increased night time noise in forecast year	686
Households experiencing reduced night time noise in forecast year	1,344