

Appendix 7.1

Junction Analysis Results

Appendix 7.1

Junction Performance

Shannon Park Roundabout

2019 Base Year	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
<i>A - Arm A - N28 North</i>	0.8	0.42	1.4	0.57	0.6	0.35	1.2	0.54	0.9	0.46
<i>B - Arm B - N28 East</i>	0.1	0.09	0.3	0.23	0.4	0.25	0.6	0.38	0.6	0.37
<i>C - Arm C - R611 South</i>	0.5	0.32	1.2	0.53	0.6	0.37	1.1	0.52	1.0	0.49

2022 Construction Year, without Development	0600-0700		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
<i>A - Arm A - N28 North</i>	0.9	0.45	1.0	0.49
<i>B - Arm B - N28 East</i>	0.1	0.11	0.7	0.41
<i>C - Arm C - R611 South</i>	0.5	0.34	1.1	0.52

2022 Construction Year, with Development	0600-0700		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
<i>A - Arm A - N28 North</i>	1.2	0.52	1.1	0.52
<i>B - Arm B - N28 East</i>	0.2	0.15	0.9	0.46
<i>C - Arm C - R611 South</i>	0.6	0.37	1.2	0.55

2023 Opening Year, without Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
<i>A - Arm A - N28 North</i>	0.9	0.46	2.6	0.71	0.8	0.42	1.6	0.60	1.0	0.49
<i>B - Arm B - N28 East</i>	0.1	0.11	0.4	0.27	0.6	0.33	1.4	0.57	0.7	0.41
<i>C - Arm C - R611 South</i>	0.5	0.34	1.4	0.58	0.8	0.41	1.7	0.63	1.1	0.53

2023 Opening Year, with Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
<i>A - Arm A - N28 North</i>	0.9	0.47	2.6	0.71	0.9	0.43	1.6	0.60	1.0	0.50
<i>B - Arm B - N28 East</i>	0.2	0.13	0.5	0.28	0.7	0.35	1.4	0.57	0.8	0.43
<i>C - Arm C - R611 South</i>	0.6	0.35	1.4	0.58	0.8	0.42	1.7	0.63	1.1	0.53

2028 Opening Year + 5, without Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
<i>A - Arm A - N28 North</i>	1.0	0.48	3.1	0.75	0.9	0.44	1.8	0.63	1.1	0.52
<i>B - Arm B - N28 East</i>	0.2	0.12	0.5	0.29	0.7	0.35	1.7	0.61	0.8	0.44
<i>C - Arm C - R611 South</i>	0.6	0.36	1.7	0.61	0.9	0.44	2.1	0.67	1.3	0.56

2028 Opening Year + 5, with Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
<i>A - Arm A - N28 North</i>	1.0	0.50	3.2	0.75	0.9	0.45	1.8	0.63	1.2	0.53
<i>B - Arm B - N28 East</i>	0.2	0.13	0.5	0.30	0.7	0.37	1.7	0.61	0.9	0.46
<i>C - Arm C - R611 South</i>	0.6	0.37	1.7	0.62	0.9	0.45	2.1	0.67	1.3	0.57

2038 Opening Year + 15, without Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
<i>A - Arm A - N28 North</i>	1.1	0.50	3.8	0.78	1.0	0.47	2.0	0.65	1.2	0.54
<i>B - Arm B - N28 East</i>	0.2	0.13	0.5	0.31	0.8	0.38	1.9	0.64	0.9	0.47
<i>C - Arm C - R611 South</i>	0.6	0.38	1.9	0.65	1.0	0.47	2.4	0.70	1.4	0.58

2038 Opening Year + 15, with Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
<i>A - Arm A - N28 North</i>	1.1	0.52	3.9	0.78	1.0	0.47	2.0	0.66	1.3	0.55
<i>B - Arm B - N28 East</i>	0.2	0.14	0.5	0.32	0.8	0.40	1.9	0.64	1.0	0.48
<i>C - Arm C - R611 South</i>	0.7	0.39	1.9	0.65	1.0	0.48	2.4	0.70	1.5	0.59

Appendix 7.1

Junction Performance

Raffeen Bridge Junction

2019 Base Year	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B (Raffeen Bridge) - Left Turn to N28	0.2	0.14	3.1	0.77	0.1	0.10	0.2	0.14	0.2	0.14
Arm B (Raffeen Bridge) - Right Turn to N28	0.1	0.05	1.1	0.53	0.3	0.22	0.4	0.26	0.2	0.15
Arm C - N28 (from Ringaskiddy) - Right-Turn to Raffeen	0.0	0.04	0.2	0.17	0.1	0.11	19.3	1.01	1.2	0.54

2022 Construction Year, without Development	0600-0700		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B (Raffeen Bridge) - Left Turn to N28	0.2	0.15	0.2	0.15
Arm B (Raffeen Bridge) - Right Turn to N28	0.1	0.06	0.2	0.17
Arm C - N28 (from Ringaskiddy) - Right-Turn to Raffeen	0.0	0.04	1.3	0.57

2022 Construction Year, with Development	0600-0700		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B (Raffeen Bridge) - Left Turn to N28	0.2	0.20	0.2	0.16
Arm B (Raffeen Bridge) - Right Turn to N28	0.1	0.07	0.3	0.20
Arm C - N28 (from Ringaskiddy) - Right-Turn to Raffeen	0.1	0.05	1.5	0.60

2023 Opening Year, without Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B (Raffeen Bridge) - Left Turn to N28	0.2	0.16	19.9	1.07	0.1	0.11	0.2	0.16	0.2	0.15
Arm B (Raffeen Bridge) - Right Turn to N28	0.1	0.06	10.3	1.03	0.4	0.27	0.7	0.40	0.2	0.18
Arm C - N28 (from Ringaskiddy) - Right-Turn to Raffeen	0.0	0.04	0.3	0.21	0.1	0.12	40.3	1.10	1.4	0.58

2023 Opening Year, with Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B (Raffeen Bridge) - Left Turn to N28	0.2	0.16	21.2	1.08	0.1	0.11	0.2	0.16	0.2	0.16
Arm B (Raffeen Bridge) - Right Turn to N28	0.1	0.06	10.9	1.04	0.4	0.28	0.7	0.41	0.2	0.18
Arm C - N28 (from Ringaskiddy) - Right-Turn to Raffeen	0.0	0.04	0.3	0.21	0.1	0.13	41.2	1.10	1.4	0.59

2028 Opening Year + 5, without Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B (Raffeen Bridge) - Left Turn to N28	0.2	0.17	37.2	1.19	0.1	0.12	0.2	0.18	0.2	0.16
Arm B (Raffeen Bridge) - Right Turn to N28	0.1	0.06	17.5	1.16	0.5	0.30	1.2	0.58	0.3	0.20
Arm C - N28 (from Ringaskiddy) - Right-Turn to Raffeen	0.0	0.04	0.3	0.22	0.2	0.13	61.2	1.17	1.6	0.62

2028 Opening Year + 5, with Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B (Raffeen Bridge) - Left Turn to N28	0.2	0.18	38.5	1.20	0.1	0.12	0.2	0.18	0.2	0.17
Arm B (Raffeen Bridge) - Right Turn to N28	0.1	0.07	18.0	1.17	0.5	0.30	1.3	0.60	0.3	0.21
Arm C - N28 (from Ringaskiddy) - Right-Turn to Raffeen	0.1	0.05	0.3	0.23	0.2	0.13	62.3	1.17	1.6	0.62

2038 Opening Year + 15, without Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B (Raffeen Bridge) - Left Turn to N28	0.2	0.18	50.9	1.27	0.1	0.13	0.4	0.26	0.2	0.17
Arm B (Raffeen Bridge) - Right Turn to N28	0.1	0.07	23.4	1.26	0.5	0.33	2.5	0.82	0.3	0.21
Arm C - N28 (from Ringaskiddy) - Right-Turn to Raffeen	0.1	0.05	0.3	0.24	0.2	0.14	76.6	1.21	1.7	0.64

2038 Opening Year + 15, with Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B (Raffeen Bridge) - Left Turn to N28	0.2	0.19	52.3	1.28	0.2	0.13	0.5	0.33	0.2	0.17
Arm B (Raffeen Bridge) - Right Turn to N28	0.1	0.07	24.0	1.27	0.6	0.33	2.8	0.86	0.3	0.22
Arm C - N28 (from Ringaskiddy) - Right-Turn to Raffeen	0.1	0.05	0.3	0.24	0.2	0.14	77.7	1.22	1.8	0.65

Appendix 7.1

Junction Performance

Shanbally Roundabout & Adjacent T-Junction

2019 Base Year	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm A - N28 to Ringaskiddy	0.2	0.18	0.4	0.23	1.1	0.49	156.2	1.27	25.6	1.01
Arm B - Marian Terrace	0.1	0.10	0.3	0.21	0.2	0.15	1.1	0.51	0.4	0.28
Arm C - N28 to Cork	2.6	0.73	8.4	0.90	0.3	0.19	0.2	0.12	0.3	0.23
Arm D - Raffeen Terrace	0.7	0.41	2.4	0.72	0.0	0.04	0.0	0.02	0.1	0.06

2022 Construction Year, without Development	0600-0700		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm A - N28 to Ringaskiddy	0.4	0.23	54.7	1.09
Arm B - Marian Terrace	0.1	0.10	0.4	0.29
Arm C - N28 to Cork	3.5	0.77	0.4	0.27
Arm D - Raffeen Terrace	0.8	0.44	0.1	0.06

2022 Construction Year, with Development	0600-0700		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm A - N28 to Ringaskiddy	0.6	0.33	118.6	1.21
Arm B - Marian Terrace	0.1	0.11	0.4	0.29
Arm C - N28 to Cork	10.7	0.92	0.5	0.32
Arm D - Raffeen Terrace	1.1	0.53	0.1	0.07

2023 Opening Year, without Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm A - N28 to Ringaskiddy	0.4	0.23	1.6	0.56	2.6	0.67	292.9	1.42	59.8	1.10

Arm B - Marian Terrace	0.1	0.10	0.4	0.26	0.2	0.18	1.1	0.54	0.4	0.29
Arm C - N28 to Cork	3.6	0.78	103.1	1.11	0.6	0.29	0.3	0.19	0.4	0.27
Arm D - Raffeen Terrace	0.8	0.44	7.5	0.92	0.1	0.05	0.0	0.03	0.1	0.07

2023 Opening Year, with Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm A - N28 to Ringaskiddy	0.5	0.26	1.6	0.57	3.1	0.71	309.7	1.43	74.0	1.13
Arm B - Marian Terrace	0.1	0.11	0.4	0.26	0.2	0.18	2.5	0.54	0.4	0.29
Arm C - N28 to Cork	4.3	0.81	107.2	1.12	0.6	0.30	0.5	0.19	0.4	0.28
Arm D - Raffeen Terrace	0.8	0.46	7.8	0.92	0.1	0.05	0.0	0.03	0.1	0.07

2028 Opening Year + 5, without Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm A - N28 to Ringaskiddy	0.4	0.24	1.4	0.58	3.1	0.71	361.6	1.50	88.0	1.16
Arm B - Marian Terrace	0.1	0.11	0.4	0.27	0.2	0.19	1.3	0.56	0.4	0.31
Arm C - N28 to Cork	4.7	0.82	149.1	1.17	0.6	0.31	0.3	0.19	0.4	0.28
Arm D - Raffeen Terrace	0.9	0.48	15.3	1.01	0.1	0.05	0.0	0.03	0.1	0.07

2028 Opening Year + 5, with Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm A - N28 to Ringaskiddy	0.5	0.28	1.8	0.59	6.2	0.75	369.9	1.51	103.8	1.19
Arm B - Marian Terrace	0.1	0.11	0.4	0.28	0.5	0.19	1.3	0.56	0.4	0.31
Arm C - N28 to Cork	5.7	0.85	154.4	1.17	1.0	0.32	0.3	0.20	0.5	0.30

Arm D - Raffeen Terrace	1.0	0.50	16.0	1.02	0.1	0.05	0.0	0.03	0.1	0.07
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2038 Opening Year + 15, without Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm A - N28 to Ringaskiddy	0.4	0.26	1.9	0.61	3.8	0.75	411.2	1.55	108.0	1.20
Arm B - Marian Terrace	0.1	0.11	0.4	0.29	0.3	0.20	1.4	0.58	0.5	0.32
Arm C - N28 to Cork	5.7	0.85	191.2	1.21	0.6	0.32	0.3	0.20	0.4	0.29
Arm D - Raffeen Terrace	1.0	0.51	25.4	1.09	0.1	0.05	0.0	0.03	0.1	0.07

2038 Opening Year + 15, with Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm A - N28 to Ringaskiddy	0.5	0.29	2.0	0.62	4.7	0.79	419.7	1.56	124.9	1.23
Arm B - Marian Terrace	0.1	0.12	0.4	0.29	0.3	0.21	1.4	0.58	0.5	0.32
Arm C - N28 to Cork	7.2	0.88	196.1	1.22	0.7	0.34	0.3	0.21	0.5	0.31
Arm D - Raffeen Terrace	1.1	0.52	26.4	1.10	0.1	0.05	0.0	0.03	0.1	0.07

Appendix 7.1

Junction Performance

Barnahely T-Junction

2019 Base Year	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - R613 Barnahely Road (Left-Turn Out)	0.1	0.07	0.2	0.16	0.2	0.16	0.8	0.43	0.5	0.32
Arm B - R613 Barnahely Road (Right-Turn Out)	0.2	0.16	0.8	0.45	0.2	0.14	0.2	0.13	0.2	0.17
Arm C - N28 to Cork (Right turn to R613)	0.2	0.17	0.5	0.30	0.1	0.09	0.1	0.12	0.1	0.09

2022 Construction Year, without Development	0600-0700		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - R613 Barnahely Road (Left-Turn Out)	0.1	0.07	0.5	0.34
Arm B - R613 Barnahely Road (Right-Turn Out)	0.2	0.17	0.2	0.19
Arm C - N28 to Cork (Right turn to R613)	0.2	0.17	0.1	0.09

2022 Construction Year, with Development	0600-0700		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - R613 Barnahely Road (Left-Turn Out)	0.1	0.08	0.6	0.36
Arm B - R613 Barnahely Road (Right-Turn Out)	0.4	0.26	0.3	0.24
Arm C - N28 to Cork (Right turn to R613)	0.2	0.18	0.1	0.10

2023 Opening Year, without Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - R613 Barnahely Road (Left-Turn Out)	0.1	0.06	0.2	0.14	0.2	0.17	1.2	0.55	0.5	0.34
Arm B - R613 Barnahely Road (Right-Turn Out)	0.2	0.17	1.3	0.56	0.2	0.14	0.2	0.13	0.2	0.15
Arm C - N28 to Cork (Right turn to R613)	0.2	0.18	0.5	0.32	0.1	0.11	0.2	0.14	0.1	0.09

2023 Opening Year, with Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - R613 Barnahely Road (Left-Turn Out)	0.1	0.06	0.2	0.14	0.2	0.17	1.2	0.55	0.5	0.34
Arm B - R613 Barnahely Road (Right-Turn Out)	0.2	0.19	1.3	0.57	0.2	0.15	0.2	0.14	0.2	0.16
Arm C - N28 to Cork (Right turn to R613)	0.2	0.18	0.5	0.32	0.1	0.11	0.2	0.14	0.1	0.09

2028 Opening Year + 5, without Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - R613 Barnahely Road (Left-Turn Out)	0.1	0.06	0.2	0.16	0.3	0.19	1.4	0.59	0.6	0.36
Arm B - R613 Barnahely Road (Right-Turn Out)	0.2	0.19	1.6	0.62	0.2	0.15	0.2	0.15	0.2	0.16
Arm C - N28 to Cork (Right turn to R613)	0.2	0.19	0.6	0.34	0.1	0.11	0.2	0.15	0.1	0.10

2028 Opening Year + 5, with Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - R613 Barnahely Road (Left-Turn Out)	0.1	0.06	0.2	0.17	0.3	0.19	1.4	0.59	0.6	0.36
Arm B - R613 Barnahely Road (Right-Turn Out)	0.2	0.20	1.6	0.63	0.2	0.16	0.2	0.15	0.2	0.17
Arm C - N28 to Cork (Right turn to R613)	0.2	0.19	0.6	0.35	0.1	0.12	0.2	0.16	0.1	0.10

2038 Opening Year + 15, without Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - R613 Barnahely Road (Left-Turn Out)	0.1	0.06	0.3	0.19	0.3	0.20	1.6	0.62	0.6	0.37
Arm B - R613 Barnahely Road (Right-Turn Out)	0.2	0.20	2.0	0.67	0.2	0.16	0.2	0.16	0.2	0.16
Arm C - N28 to Cork (Right turn to R613)	0.2	0.19	0.6	0.36	0.2	0.12	0.2	0.16	0.1	0.10

2038 Opening Year + 15, with Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - R613 Barnahely Road (Left-Turn Out)	0.1	0.06	0.3	0.20	0.3	0.20	1.6	0.62	0.6	0.38
Arm B - R613 Barnahely Road (Right-Turn Out)	0.3	0.21	2.0	0.68	0.2	0.17	0.2	0.17	0.2	0.17
Arm C - N28 to Cork (Right turn to R613)	0.3	0.20	0.6	0.37	0.2	0.12	0.2	0.16	0.1	0.10

Appendix 7.1

Junction Performance

Ferry Port Access Junction

2019 Base Year	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - Loughbeg Road (Left-Turn)	0.1	0.11	0.0	0.04	0.1	0.10	1.3	0.56	0.7	0.40
Arm B - Loughbeg Road (Right-Turn)	0.0	0.01	0.0	0.01	0.0	0.01	0.0	0.00	0.0	0.01
Arm A - N28 to/from Ringaskiddy (Right-Turn to Port)	0.0	0.01	0.0	0.01	0.0	0.01	0.0	0.00	0.0	0.00
Arm D - Ferry Port (Left-Turn)	0.0	0.00	0.0	0.01	0.0	0.02	0.0	0.01	0.0	0.00
Arm D - Ferry Port (Right-Turn)	0.1	0.02	0.0	0.03	0.0	0.03	0.1	0.08	0.0	0.03
Arm C - N28 to/from Cork (Right-Turn to Loughbeg Road)	0.9	0.46	0.9	0.47	0.1	0.08	0.0	0.04	0.3	0.23

2022 Construction Year, without Development	0600-0700		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - Loughbeg Road (Left-Turn)	0.1	0.11	0.7	0.41
Arm B - Loughbeg Road (Right-Turn)	0.0	0.01	0.0	0.01
Arm A - N28 to/from Ringaskiddy (Right-Turn to Port)	0.0	0.02	0.0	0.00
Arm D - Ferry Port (Left-Turn)	0.0	0.00	0.0	0.00
Arm D - Ferry Port (Right-Turn)	0.3	0.11	0.2	0.12
Arm C - N28 to/from Cork (Right-Turn to Loughbeg Road)	0.9	0.48	0.3	0.23

2022 Construction Year, with Development	0600-0700		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - Loughbeg Road (Left-Turn)	0.1	0.11	0.8	0.43
Arm B - Loughbeg Road (Right-Turn)	0.0	0.01	0.0	0.01
Arm A - N28 to/from Ringaskiddy (Right-Turn to Port)	0.0	0.02	0.0	0.00
Arm D - Ferry Port (Left-Turn)	0.0	0.00	0.0	0.00
Arm D - Ferry Port (Right-Turn)	0.3	0.13	0.3	0.13
Arm C - N28 to/from Cork (Right-Turn to Loughbeg Road)	1.0	0.49	0.3	0.25

2023 Opening Year, without Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - Loughbeg Road (Left-Turn)	0.1	0.11	0.0	0.04	0.1	0.10	1.4	0.59	0.7	0.42
Arm B - Loughbeg Road (Right-Turn)	0.0	0.01	0.0	0.01	0.0	0.01	0.0	0.00	0.0	0.01
Arm A - N28 to/from Ringaskiddy (Right-Turn to Port)	0.0	0.02	0.0	0.01	0.0	0.01	0.0	0.00	0.0	0.00
Arm D - Ferry Port (Left-Turn)	0.0	0.00	0.0	0.01	0.0	0.02	0.0	0.01	0.0	0.00
Arm D - Ferry Port (Right-Turn)	0.3	0.11	0.7	0.24	1.0	0.34	3.7	0.77	0.2	0.12
Arm C - N28 to/from Cork (Right-Turn to Loughbeg Road)	0.9	0.48	1.0	0.49	0.1	0.09	0.0	0.05	0.3	0.24

2023 Opening Year, with Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - Loughbeg Road (Left-Turn)	0.1	0.11	0.0	0.04	0.1	0.11	1.4	0.59	0.7	0.42
Arm B - Loughbeg Road (Right-Turn)	0.0	0.01	0.0	0.01	0.0	0.01	0.0	0.00	0.0	0.01
Arm A - N28 to/from Ringaskiddy (Right-Turn to Port)	0.0	0.00	0.0	0.01	0.0	0.01	0.0	0.00	0.0	0.00
Arm D - Ferry Port (Left-Turn)	0.0	0.00	0.0	0.01	0.0	0.02	0.0	0.01	0.0	0.00
Arm D - Ferry Port (Right-Turn)	0.3	0.11	0.7	0.24	1.0	0.34	3.8	0.78	0.2	0.12
Arm C - N28 to/from Cork (Right-Turn to Loughbeg Road)	0.9	0.48	1.0	0.49	0.1	0.09	0.0	0.05	0.3	0.24

2028 Opening Year + 5, without Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - Loughbeg Road (Left-Turn)	0.1	0.12	0.1	0.04	0.1	0.11	1.6	0.62	0.8	0.44
Arm B - Loughbeg Road (Right-Turn)	0.0	0.01	0.0	0.01	0.0	0.01	0.0	0.00	0.0	0.01
Arm A - N28 to/from Ringaskiddy (Right-Turn to Port)	0.0	0.02	0.0	0.01	0.0	0.01	0.0	0.00	0.0	0.00
Arm D - Ferry Port (Left-Turn)	0.0	0.00	0.0	0.01	0.0	0.02	0.0	0.01	0.0	0.00
Arm D - Ferry Port (Right-Turn)	0.3	0.11	0.7	0.25	1.0	0.34	4.1	0.79	0.2	0.12
Arm C - N28 to/from Cork (Right-Turn to Loughbeg Road)	1.0	0.51	1.1	0.52	0.1	0.09	0.1	0.05	0.3	0.25

2028 Opening Year + 5, with Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - Loughbeg Road (Left-Turn)	0.1	0.12	0.1	0.04	0.1	0.11	1.6	0.62	0.8	0.44
Arm B - Loughbeg Road (Right-Turn)	0.0	0.01	0.0	0.01	0.0	0.01	0.0	0.00	0.0	0.01
Arm A - N28 to/from Ringaskiddy (Right-Turn to Port)	0.0	0.02	0.0	0.01	0.0	0.01	0.0	0.00	0.0	0.00
Arm D - Ferry Port (Left-Turn)	0.0	0.00	0.0	0.01	0.0	0.02	0.0	0.01	0.0	0.00
Arm D - Ferry Port (Right-Turn)	0.3	0.12	0.7	0.25	1.1	0.35	4.2	0.80	0.3	0.13
Arm C - N28 to/from Cork (Right-Turn to Loughbeg Road)	1.0	0.51	1.1	0.52	0.1	0.09	0.1	0.05	0.3	0.25

2038 Opening Year + 15, without Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - Loughbeg Road (Left-Turn)	0.1	0.12	0.1	0.04	0.1	0.11	1.8	0.64	0.8	0.45
Arm B - Loughbeg Road (Right-Turn)	0.0	0.01	0.0	0.01	0.0	0.01	0.0	0.00	0.0	0.01
Arm A - N28 to/from Ringaskiddy (Right-Turn to Port)	0.0	0.02	0.0	0.01	0.0	0.01	0.0	0.00	0.0	0.00
Arm D - Ferry Port (Left-Turn)	0.0	0.00	0.0	0.01	0.0	0.02	0.0	0.01	0.0	0.00
Arm D - Ferry Port (Right-Turn)	0.3	0.12	0.7	0.26	1.0	0.35	4.4	0.80	0.2	0.13
Arm C - N28 to/from Cork (Right-Turn to Loughbeg Road)	1.1	0.52	1.2	0.54	0.1	0.09	0.1	0.05	0.4	0.26

2038 Opening Year + 15, with Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - Loughbeg Road (Left-Turn)	0.1	0.12	0.1	0.04	0.1	0.12	1.8	0.65	0.8	0.46
Arm B - Loughbeg Road (Right-Turn)	0.0	0.01	0.0	0.01	0.0	0.01	0.0	0.00	0.0	0.01
Arm A - N28 to/from Ringaskiddy (Right-Turn to Port)	0.0	0.02	0.0	0.01	0.0	0.01	0.0	0.00	0.0	0.00
Arm D - Ferry Port (Left-Turn)	0.0	0.00	0.0	0.01	0.0	0.02	0.0	0.02	0.0	0.00
Arm D - Ferry Port (Right-Turn)	0.3	0.12	0.7	0.26	1.1	0.35	4.5	0.81	0.3	0.13
Arm C - N28 to/from Cork (Right-Turn to Loughbeg Road)	1.1	0.53	1.2	0.54	0.1	0.10	0.1	0.05	0.4	0.26

Appendix 7.1

Junction Performance

Resource Recovery Centre Site Access

Note – In all ‘without scenarios’ the results are zero because the junction is not in place

2022 Construction Year, without Development	0600-0700		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - Indaver Entrance	N/A	N/A	N/A	N/A
Arm C - N28 to/from Ringaskiddy (Right-Turn to Indaver)	N/A	N/A	N/A	N/A

2022 Construction Year, with Development	0600-0700		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - Indaver Entrance	0.2	0.15	0.3	0.19
Arm C - N28 to/from Ringaskiddy (Right-Turn to Indaver)	0.7	0.4	0.2	0.16

2023 Opening Year, without Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - Indaver Entrance	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arm C - N28 to/from Ringaskiddy (Right-Turn to Indaver)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2023 Opening Year, with Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - Indaver Entrance	0.1	0.05	0.0	0.01	0.1	0.06	0.0	0.01	0.1	0.04
Arm C - N28 to/from Ringaskiddy (Right-Turn to Indaver)	0.1	0.07	0.0	0.01	0.1	0.03	0.0	0.01	0.1	0.05

2028 Opening Year +5, without Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - Indaver Entrance	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arm C - N28 to/from Ringaskiddy (Right-Turn to Indaver)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2028 Opening Year +5, with Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - Indaver Entrance	0.1	0.05	0.0	0.01	0.1	0.06	0.0	0.01	0.1	0.04
Arm C - N28 to/from Ringaskiddy (Right-Turn to Indaver)	0.1	0.07	0.0	0.01	0.1	0.03	0.0	0.01	0.1	0.05

2038 Opening Year +15, without Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - Indaver Entrance	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arm C - N28 to/from Ringaskiddy (Right-Turn to Indaver)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2038 Opening Year +15, with Development	0600-0700		0800-0900		1400-1500		1645-1745		1800-1900	
<i>Parameter</i>	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)	Queue (PCU)	RFC (%)
Arm B - Indaver Entrance	0.1	0.05	0.0	0.01	0.1	0.06	0.0	0.01	0.1	0.04
Arm C - N28 to/from Ringaskiddy (Right-Turn to Indaver)	0.1	0.07	0.0	0.01	0.1	0.03	0.0	0.01	0.1	0.05