APPENDIX H SUMMARY OF ROAD GEOMETRY DEPARTURES FROM STANDARD

TABLE 1.0:		SUMMARY OF ROAD GEOMETRY DEPARTURES FROM STANDARD									
		No. of Departures per Link									
Standard	**Element**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**11**	**15**	**31**
TD 9/93	Horizontal Radius (Hr)	0	0	1	0	0	1	0	0	0	1
	K Value	0	0	0	0	0	0	0	0	0	0
	Stopping Sight Distance (SSD)	0	0	1	0	0	0	0	0	0	0
	Combination of Hr/K /SSD	8	6	9	5	0	2	1	4	6	2
	Substandard K and/or SSD on approach to junction	14	6	8	5	2	4	3	10	8	2
	Superelevation	1	1	1	1	1	1	1	1	1	1
	Transition Lengths	0	0	0	1	0	1	1	1	1	1
	Sub-Total	***23***	***13***	***20***	***12***	***3***	***9***	***6***	***16***	***16***	***7***
TD 27/05	Cross-Section	1	1	1	1	1	1	1	1	1	1
TD 22/06	Grade Separated Junction Design	13	9	0	3	0	1	2	0	5	0
TD 41/95	Direct Access Design	0	0	0	0	0	1	1	1	0	2
TD 42/95	Priority Junction Design	0	0	0	0	0	0	3	2	0	0
TD 50/04	Signal Controlled Junction Design	0	0	0	0	0	1	1	1	0	0
	Total (per Link)	**37**	**23**	**21**	**16**	**4**	**13**	**14**	**21**	**22**	**10**
	Total	**181**									

TABLE 2.0: TD 9/93 DEPARTURES

				Steps below Desirable or Absolute Minimum			Departure required for proposed:						
	Link	Chainage(s)	TD 9/93 para	Hr	K	SSD	Hr	K	SSD	Combination of Hr/K/SSD	Substandard K and/or SSD on approach to junction	SuperE	Trans. Length
001	1	0+160 to 0+175	1.24	2	1	2				X			
002	1	0+345 to 0+355	1.24		1	1				X			
003	1	0+380 to 0+445	1.24		1	1				X			
004	1	0+545 to 0+635	1.24		1	1				X			
005	1	0+640 to 0+685	1.24		1	2				X			
006	1	0+690 to 0+700	1.24		2	2				X			
007	1	0+705 to 0+745	1.24	2	2	2				X			
008	1	0+750 to 0+755	1.24		2	2				X			
009	1	0+160 to 0+175	1.26		1	2					X		
010	1	0+180 to 0+335	1.26			1					X		
011	1	0+340	1.26			1					X		
012	1	0+345 to 0+355	1.26		1	1					X		
013	1	0+360 to 0+375	1.26		1						X		
014	1	0+380 to 0+445	1.26		1	1					X		
015	1	0+450 to 0+540	1.26			1					X		
016	1	0+545 to 0+550	1.26		1	1					X		
017	1	0+635	1.26		1	1					X		
018	1	0+640 to 0+685	1.26		1	2					X		
019	1	0+690 to 0+720	1.26		2	2					X		
020	1	0+725 to 0+755	1.26		2	2					X		
021	1	0+760 to 0+810	1.26		2						X		
022	1	0+815	1.26			2					X		
023	1	0+160 to 0+340 & 0+810 to 0+814	3.10									X	
024	2	0+065 to 0+155	1.24		1	1				X			
025	2	0+310 to 0+390	1.24	3		1				X			
026	2	0+395 to 0+435	1.24	3		2				X			
027	2	0+440 to 0+455	1.24	3	1	2				X			
028	2	0+460 to 0+465	1.24	3	1	1				X			
029	2	0+470	1.24	3	1					X			
030	2	0+005 to 0+060	1.26			1					X		
031	2	0+065 to 0+155	1.26		1	1					X		
032	2	0+160 to 0+235	1.26		1						X		
033	2	0+295 to 0+300	1.26			1					X		
034	2	0+510 to 0+590	1.26		1						X		
035	2	0+850 to 0+900	1.26			1					X		
036	2	0+876 to 1+030	3.10									X	
037	3	0+135 to 0+205	3.40	4			X						
038	3	0+125 to 0+140	2.80			3			X				
039	3	0+025 to 0+055	1.24		1	1				X			
040	3	0+060 to 0+120	1.24		1	2				X			
041	3	0+125 to 0+130	1.24		1	3				X			
042	3	0+135	1.24	4	1	3				X			
043	3	0+140	1.24	4	2	3				X			
044	3	0+145 to 0+180	1.24	4	2	2				X			
045	3	0+185 to 0+200	1.24	4	2	1				X			
046	3	0+205	1.24	4	2	1				X			
047	3	0+210	1.24		2	1				X			
048	3	0+025 to 0+055	1.26		1	1					X		
049	3	0+060 to 0+120	1.26		1	2					X		
050	3	0+125 to 0+130	1.26		1	3					X		
051	3	0+135	1.26		1	3					X		
052	3	0+140	1.26		2	3					X		
053	3	0+145 to 0+180	1.26		2	2					X		
054	3	0+185 to 0+210	1.26		2	1					X		
055	3	0+215 to 0+245	1.26		2						X		
056	3	0+252 to 0+290	3.10									X	
057	4	0+175 to 0+215	1.24		2	1				X			
058	4	0+220 to 0+225	1.24		1	1				X			
059	4	0+230 to 0+285	1.24	2	1	1				X			
060	4	0+290 to 0+310	1.24	2	1					X			
061	4	0+315 to 0+330	1.24	2	2					X			
062	4	0+115 to 0+170	1.26			1					X		
063	4	0+175 to 0+190	1.26		2	1					X		
064	4	0+250 to 0+285	1.26		1	1					X		
065	4	0+290 to 0+310	1.26		1						X		
066	4	0+315 to 0+415	1.26		2						X		
067	4	0+115 to 0+155	3.10									X	
068	4	0+155 to 0+225 & 0+334 to 0+404	3.15										X
069	5	0+005 to 0+090	1.26		2						X		
070	5	0+095 to 0+145	1.26		2						X		
071	5	0+000 to 0+023	3.10									X	
072	6	0+305 to 0+340	3.40	4			X						
073	6	0+285 to 0+300	1.24	3	1					X			
074	6	0+305 to 0+340	1.24	4	2					X			
075	6	0+000 to 0+055	1.26		1						X		
076	6	0+210 to 0+260	1.26			1					X		
077	6	0+285 to 0+300	1.26	3	1						X		
078	6	0+305 to 0+340	1.26	4	2						X		

TABLE 2.0: TD 9/93 DEPARTURES

				Steps below Desirable or Absolute Minimum			Departure required for proposed:						
	Link	Chainage(s)	TD 9/93 para	Hr	K	SSD	Hr	K	SSD	Combination of Hr/K/SSD	Substandard K and/or SSD on approach to junction	SuperE	Trans. Length
079	6	0+305 to 0+341 & 0+341 to 0+385	3.10									X	
080	6	0+219 to 0+269 & 0+342	3.15										X
081	7	0+045 to 0+075	1.24	3	1					X			
082	7	0+045 to 0+075	1.26		1						X		
083	7	0+155 to 0+195	1.26		1						X		
084	7	0+200 to 0+215	1.26		2						X		
085	7	0+040 to 0+086	3.10									X	
086	7	0+086	3.15										X
087	11	0+155 to 0+170 (Northbound)	1.24		1	1				X			
088	11	0+175 to 0+285 (Northbound)	1.24		1	1				X			
089	11	0+110 to 0+150 (Northbound)	1.26		1						X		
090	11	0+155 to 0+170 (Northbound)	1.26		1	1					X		
091	11	0+175 to 0+285 (Northbound)	1.26		1	1					X		
092	11	0+290 to 0+365 (Northbound)	1.26		1						X		
093	11	0+370 to 0+425 (Northbound)	1.26		1						X		
094	11	0+245 to 0+365 (Southbound)	1.24		1	1				X			
095	11	0+370 to 0+390 (Southbound)	1.24		1	1				X			
096	11	0+110 to 0+170 (Southbound)	1.26		1						X		
097	11	0+175 to 0+240 (Southbound)	1.26		1						X		
098	11	0+245 to 0+365 (Southbound)	1.26		1	1					X		
099	11	0+370 to 0+390 (Southbound)	1.26		1	1					X		
100	11	0+395 to 0+425 (Southbound)	1.26		1						X		
101	11	0+095 to 0+132, 0+132 to 0+182, 0+330 to 0+392 & 0+392 to 0+460	3.10									X	
102	11	0+132, 0+182, 0+330 & 0+393	3.15										X
103	15	0+000 to 0+010	1.24	2	1	1				X			
104	15	0+015 to 0+020	1.24	2	1	1				X			
105	15	0+025 to 0+050	1.24	3	2	2				X			
106	15	0+055 to 0+060	1.24	3	2	1				X			
107	15	0+065	1.24	3	2					X			
108	15	0+070 to 0+075	1.24	3	2					X			
109	15	0+000 to 0+010	1.26		1	1					X		
110	15	0+015 to 0+020	1.26		1	1					X		
111	15	0+025 to 0+050	1.26		2	2					X		
112	15	0+055 to 0+060	1.26		2	1					X		
113	15	0+065	1.26		2						X		
114	15	0+070 to 0+105	1.26		2						X		
115	15	0+190 to 0+220	1.26			4					X		
116	15	0+225 to 0+250	1.26		3	4					X		
117	15	0+000 to 0+076 & 0+196 to 0+252	3.10									X	
118	15	0+076 to 0+136 & 0+197	3.15										X
119	31	0+020 to 0+070	3.40	5			X						
120	31	0+025 to 0+040	1.24	4		2				X			
121	31	0+045	1.24	4		1				X			
122	31	0+025 to 0+040	1.26			2					X		
123	31	0+045	1.26			1					X		
124	31	0+000 to 0+019 & 0+019 to 0+070	3.10									X	
125	31	0+019 & 0+070	3.15										X

TABLE 3.0: TD 27/05 DEPARTURES

	Link	Road Classification	TD 27/05 para	Relevant Figure No.	Departure required for proposed:			
					Verge Widths	Nearside Hard Shoulder / Hardstrip width	Lane width(s)	Offside Hardstrip width
126	1	IL2D	4.2.1	4-4b	X	X	X	
127	2	IL2B	4.2.1	4-2b	X	X	X	X
128	3	IL2D	4.2.1	4-4b	X	X	X	X
129	4	IL2B	4.2.1	4-2b	X	X	X	
130	5	DG1D	4.2.1	4-4b	X	X		
131	6	MG1B	4.2.1	4-2b	X	X		
132	7	DG1B	4.2.1	4-2b		X	X	X
133	11	SU2	4.2.1	4-4a			X	
134	15	MG2C	4.2.1	4-1b	X	X		X
135	31	MG1D	4.2.1	4-4b	X	X		

TABLE 4.0:		TD 22/06 DEPARTURES		
	Link	Junction	TD 22/06 para	Departure required for:
136	1	Clifton Street (Merge)	4.22	Nose ratio
137	1	Clifton Street (Merge)	4.17	SSD not achieved through junction
138	1	Link 5 (Diverge)	2.43	Diverge layout type and no. of upstream lanes
139	1	Link 5 (Diverge)	2.48	Radii of edge line layout
140	1	Link 5 (Diverge)	2.71	No. of traffic lanes required for weaving
141	1	Link 3 (Diverge)	2.43	Diverge layout type and no. of upstream lanes
142	1	Link 3 (Diverge)	4.22	Length of exit taper, length of nose, edge line radius at start of taper and tip of diverge nose
143	1	Link 3 (Diverge)	4.30	Spacing of junction with diverge to York Street
144	1	Link 3 (Diverge)	4.34	Weaving assessment
145	1	M2 Merge	2.29	Merge layout type and no. of downstream lanes
146	1	M2 Merge	4.22	Nose length
147	1	M2 Merge	2.34	Near straight provision upstream of back of nose
148	1	M2 Merge	4.17	SSD not achieved at back of nose
149	2	M2 Diverge	4.18	SSD not achieved from back of nose
150	2	Link 31 (Merge)	4.22	Nose length and ratio
151	2	Link 31 (Merge)	4.30	Spacing between successive junctions
152	2	Link 4 (Merge)	2.29	Merge layout type and no. of downstream mainline lanes
153	2	Link 4 (Merge)	4.22	Nose length
154	2	Clifton Street (Diverge)	2.43	Diverge layout type
155	2	Clifton Street (Diverge)	4.22	Nose length and ratio
156	2	Clifton Street (Diverge)	2.48	Radii of edge line layout
157	2	Clifton Street (Diverge)	4.18	SSD not achieved at back of nose
158	4	Link 7	2.43	Diverge layout type
159	4	Link 7	4.22	Auxilliary lane length and auxilliary lane taper.
160	4	Link 7	2.48	Radii of edge line layout
161	6	Link 3	2.34	Near straight provision upstream of back of nose
162	7	Link 4	2.46	Near straight provision downstream of back of nose
163	7	M3 Diverge	4.30	Spacing between successive junctions
164	15	M2 Merge	2.29	Merge layout type and no. of upstream & downstream mainline lanes
165	15	M2 Merge	4.22	Slip road reduction taper
166	15	M2 Merge	2.34	Near straight provision upstream of back of nose
167	15	M2 Merge	4.30	Spacing between successive junctions
168	15	M2 Merge	4.35	Spacing between weaving (merge/diverge) arrangement

TABLE 5.0:		OTHER IDENTIFIED ROAD GEOMETRY STANDARDS DEPARTURES			
	Link (s)	Element	Relevant Standard	Paragraph	Departure required for:
169	25	Great George's Street Carpark	TD 41/95	2.22 2.12 2.14 2.27	Visibility splay ("Y" distance on RHS) Junction spacing Major Road gradient Dwell area gradient
170	36	Access on Nelson Street (1)	TD 41/95	2.22 2.12 2.27	Visibility splay ("Y" distance on LHS) Junction spacing Dwell area gradient
171	37	Access on Nelson Street (2)	TD 41/95	2.22 2.12 2.27	Visibility splay ("Y" distance) Junction spacing Dwell area gradient
172	38	Access to Pumping Station	TD 41/95	2.22 2.12	Visibility splay ("Y" distance on RHS) Junction spacing
173	39	Access to residual lands on Link 6	TD 41/95	2.22 2.12	Visibility splay ("Y" distance on RHS) Junction spacing
174	11	Jug-handle on York Street (1)	TD 42/95	7.6c 7.6c 3.6 & 3.7	Visibility splay ("X" distance) Visibility splay ("Y" distance) Approach gradient
175	11	Jug-handle on York Street (2)	TD 42/95	7.6c 7.6c	Visibility splay ("X" distance) Visibility splay ("Y" distance)
176	12	Nelson Street Left-out to Link 7	TD 42/95	7.6c 7.6c 3.6 & 3.7	Visibility splay ("X" distance) Visibility splay ("Y" distance) Approach gradient
177	18	Access to Little Patrick Street on Link 12 (1)	TD 42/95	7.6c 3.6 & 3.7	Visibility splay ("Y" distance) Approach gradient
178	19	Access to Little Patrick Street on Link 12 (2)	TD 42/95	7.6c	Visibility splay ("Y" distance)
179	10	Dock Street Junction	TD 50/04	2.16	Obstruction within junction intervisibility zone
180	11	Great Patrick Street / York Street Junction	TD 50/04	2.16	Obstruction within junction intervisibility zone
181	63	Dunbar Link Junction	TD 50/04	2.16	Obstruction within junction intervisibility zone