

Argent St George, London and
Continental Railways and Exel
King's Cross Central
Transport Assessment

April 2004

Appendix 9

PROVISIONAL PTAL ASSESSMENT

SUMMARY

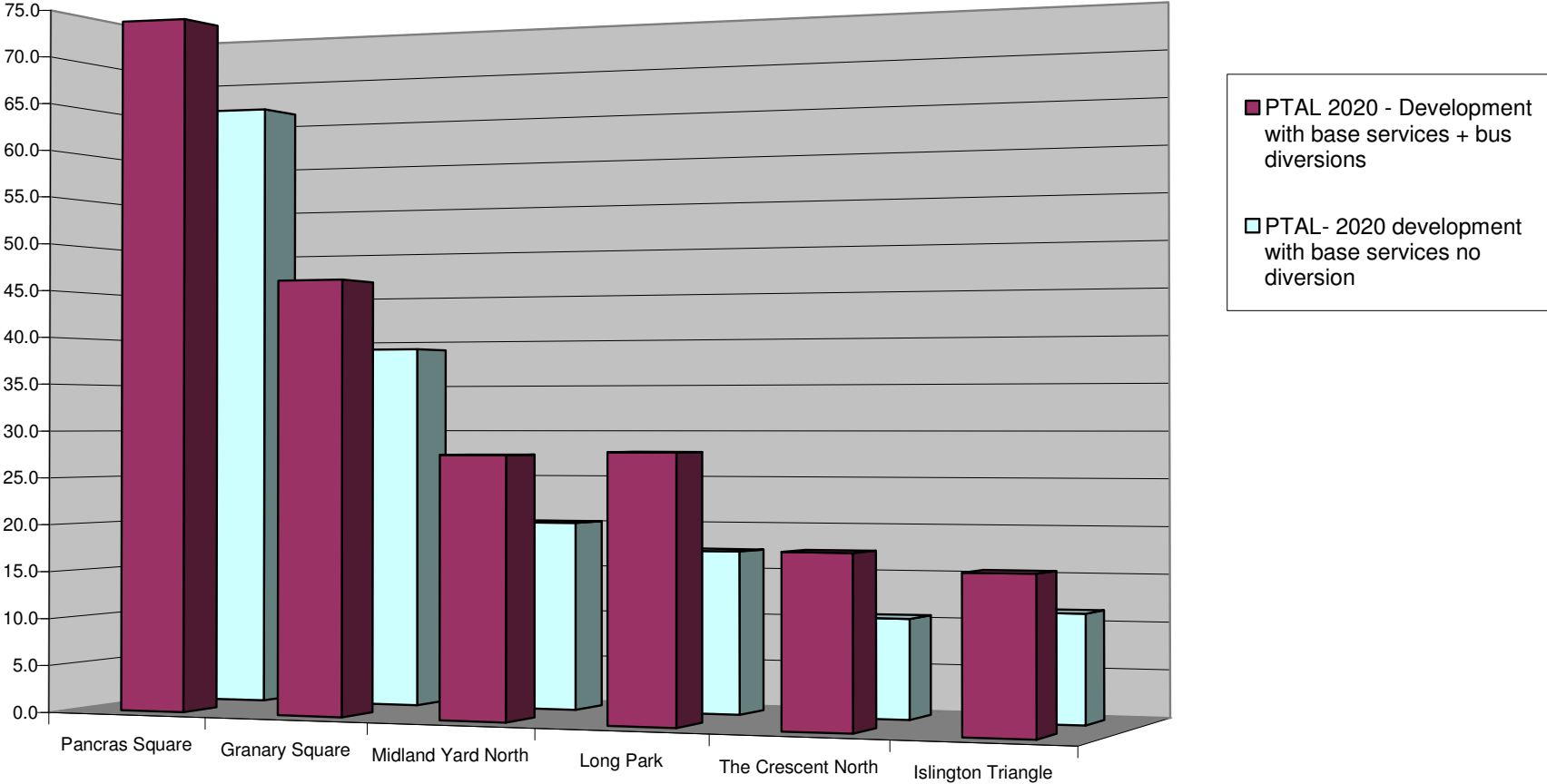
ACCESSIBILITY INDICES

	Location	Existing site with current services	Development with current services	PTAL- 2020 development with base services no diversion	PTAL 2020 - Development with base services + bus diversions	PTAL 2020 - Development with base services, route diversion, bph enhancement
1	Pancras Square	0.0	58.1	65.9	74.1	74.2
2	Granary Square	27.9	34.8	39.0	45.9	46.0
3	Midland Yard North	0.0	17.2	20.1	27.5	27.6
4	Long Park	0.0	16.5	17.2	27.8	27.9
5	The Crescent North	0.0	9.9	10.5	17.9	18.0
6	Islington Triangle	0.0	10.6	11.4	16.1	16.2

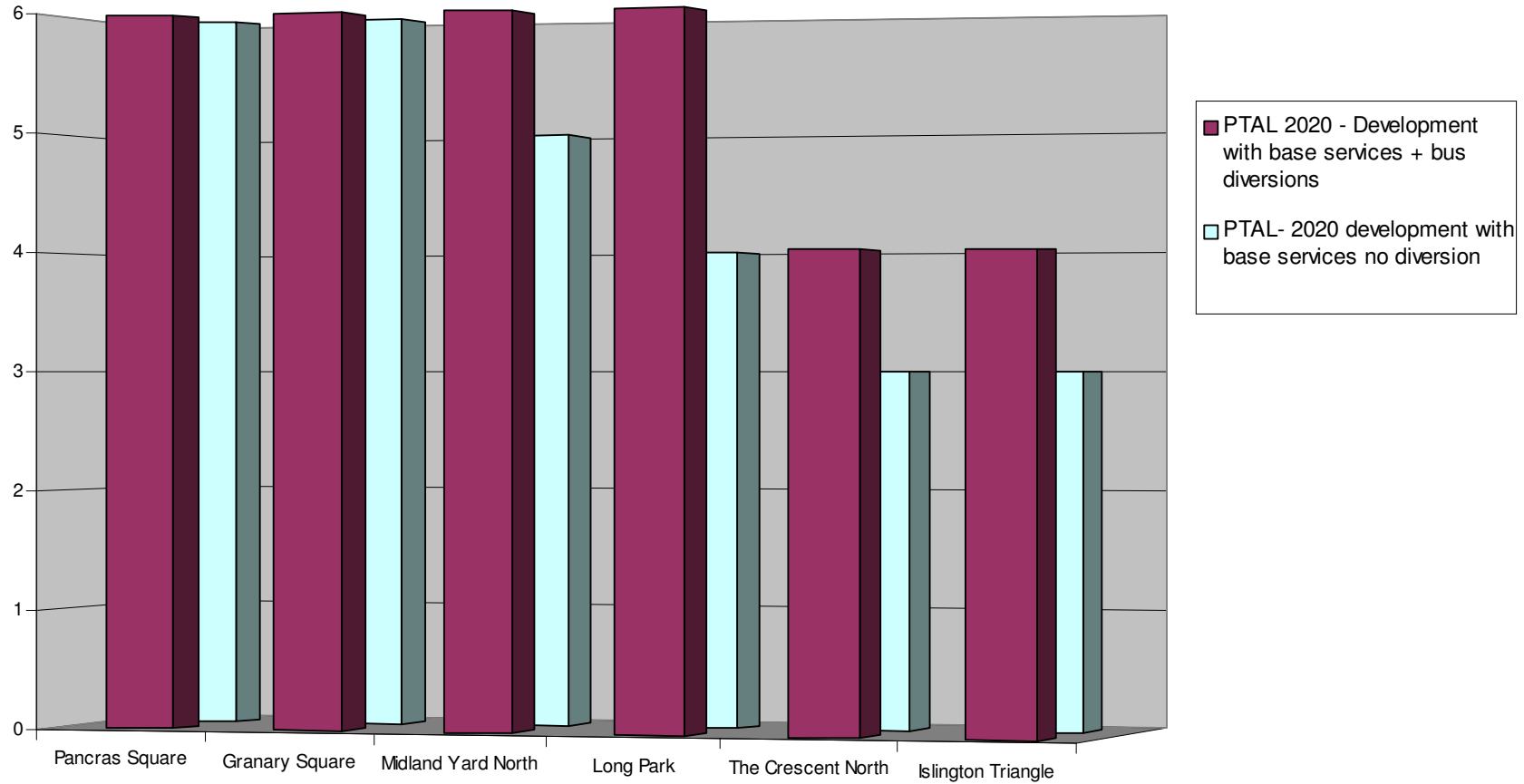
PTAL LEVELS

	Location	Existing site with current services	Development with current services	PTAL- 2020 development with base services no diversion	PTAL 2020 - Development with base services + bus diversions	PTAL 2020 - Development with base services, route diversion, bph enhancement
1	Pancras Square	1	6	6	6	6
2	Granary Square	6	6	6	6	6
3	Midland Yard North	1	4	5	6	6
4	Long Park	1	4	4	6	6
5	The Crescent North	1	2	3	4	4
6	Islington Triangle	1	3	3	4	4

ACCESSIBILITY INDICES



PTAL LEVELS



Assumed walk distances to site based on the PTAL criteria according to the current Transport for London Methodology published February 2003:

Maximum walk distance to bus 640 metres

Maximum walk distance to rail 960 metres

Location	1. Pancras Square	2. Granary Square	3. Midland Yard North	4. Long Park	5. The Crescent North	6. Islington Triangle
Via Existing routes						
Bus Stops D & E/ R	470/630	610/too far	too far	too far	too far	too far
Bus Stops F& G/ H	570/too far	too far	too far	too far	too far	too far
Bus Stops York Way	410	230	170	170	250	150
Bus stop J	580	530	530	too far	too far	too far
Bus stops Agar Grove	too far	too far	too far	550	540	450
KX Rail entrance	400	580	810	too far	too far	too far
KX Underground entrance	420	600	820	too far	too far	too far
St Pancras Rail entrance	210	510	too far	too far	too far	too far
Caladonian Rd & Barnsbury	too far	too far	too far	too far	too far	too far
Camden Road	too far	too far	too far	too far	too far	too far
Caladonian Road	too far	too far	too far	too far	too far	too far
Thameslink	too far	898	too far	too far	too far	too far
Future routes made possible by the Kings Cross Central Development						
KXC bus stop A	390	570	too far	too far	too far	too far
KXC bus stop B	150	440	640	too far	too far	too far
KXC bus stop C	70	250	500	too far	too far	too far
KXC bus stop D	110	170	420	520	too far	too far
KXC bus stop E	120	150	400	510	too far	too far
KXC bus stop F	260	90	220	450	too far	too far
KXC bus stop G	270	80	210	440	670	670
KXC bus stop H	530	180	220	120	380	380
KXC bus stop I	530	170	210	130	390	390
KXC bus stop J	too far	510	410	160	70	200
KXC bus stop K	too far	500	400	150	70	200
Bus Stops D & E/ R	470/630	610/too far	too far	too far	too far	too far
Bus Stops F& G/ H	570/too far	too far	too far	too far	too far	too far
Bus stop J	580	530	530	too far	too far	too far
Bus Stops York Way	410	230	170	170	250	150
Bus stops Agar Grove	too far	too far	too far	550	540	450
KX Rail entrance	220	430	690	810	too far	too far
KX Underground entrance	50	290	540	660	950	940
St Pancras Rail entrance	210	510	750	900	too far	too far
Caladonian Rd & Barnsbury	too far	too far	too far	too far	too far	too far
Camden Road	too far	too far	too far	too far	too far	too far
Caladonian Road	too far	too far	too far	too far	too far	too far

n.b for the existing PTAL only Granary Square was assumed to be accessible

n.b for the future bus stops within the Kings Cross Central site please refer to site plan

Assumed frequencies for Rail and Underground Lines (trains per hour)

Line	2002/3	2007	2020
East Coast Mainline	16	16	16
Thameslink	19	19	24
Midland Mainline	5	5	5
CTRL International	0	7	7
CTRL Domestic	0	8	8
Victoria	28	33	33
Picadilly	26	24	30
Northern	19	25	25
Hammersmith, Circle, Metropolitan	30	34	34

Bus Route and Frequency Assumptions

Bus Corridor	Route	to route in site?	Frequency on existing route (bph)	2011 Frequencies bph	Additional bph for devpt	Assumed diverted via site	Extra capacity figures	Existing stops served in KX	Future stops served in KX
Euston Road	10	Yes	12	12		12	12	A H J R	KX C A B D E H I J K
KX Road/ Gray's Inn Road & Caledonian Rd	17	Unlikely	7.5	8			8	G J N/ H L	G J N/ H L
Pentonville Road & Euston Road	30	Possibly	7.5	8			8	C E K/ A R X	C E K/ A R X
Pancras Road	31	Yes	12	17		17	17	Camden	KX C D E H I J K
KX Road/ Gray's Inn Road	45	Possibly	6	8			8	D L	D L
KX Road/ Gray's Inn Road & Pancras Road	46	Already does	6	7			7	D L/ G N O	KX C E D
KX Road/ Gray's Inn Road	63	Possibly	9	11			11	D L	D L
Pentonville Road & Euston Road	73	Unlikely	15	17			17	C E K/ A R X	C E K/ A R X
Euston Road & Caledonian Road	91	Possibly	9	9			9	C D G J/ A H R	C D G J/ A H R
Caledonian Road	153	Unlikely	5	7			7	Angel	Angel
Pentonville Road & Euston Road	205	Unlikely	6	8			8	A R X/ C E K	A R X/ C E K
Pancras Road & Pentonville Road	214	Already does	8	11			11	G X/ E K	KX C E D
Caledonian Road	259	Possibly	5	7			7	G J N/ H L	G J N/ H L
Caledonian Road	274	Unlikely	7.5	11			11	Caledonian Road	Caledonian Road
York Way & Euston Road	390	Yes	7.5	10	1	10	11	C D G/ A H J R	KX C A C D G F
Pentonville Road	394	Unlikely	4	5			5	Pentonville Road	Pentonville Road
Pentonville Road	476	Unlikely	7	9			9	A H J R/ C E K	A H J R/ C E K
Pentonville Road	New Route	Yes			3	3	3	n/a	KX C A B D E H I J K

n.b frequencies are assumed to be for weekday a.m. peak hour

Bus stop and walk distance assumptions

PTAL Location

1

Route	Closest bus stop existing	distance	to include in PTAL Scenario	Closest bus stop future	distance	to include in PTAL Scenario
10	E	470	B C	KXC D/E	110	D E
17	G	570	B C	G	570	D E
30	E	470	B C	E	470	D E
31	Camden	too far	NO	KXC D/E	110	D E
45	D	470	B C	D	470	D E
46	D	470	B C	KXC D/E	110	D E
63	D	470	B C	D	470	D E
73	E	470	B C	E	470	D E
91	D	470	B C	D	470	D E
153	Angel	too far	NO	Angel	too far	NO
205	E	470	B C	E	470	D E
214	D	470	B C	KXC D/E	110	D E
259	G	570	B C	G	570	D E
274	Agar Grove	too far	NO	Agar Grove	too far	D E
390	D	470	B C	KXC C/D	70	D E
394	Pentonville Rd	too far	NO	Pentonville Rd	too far	NO
476	E	470	B C	E	470	D E
New Route	N/A	N/A	NO	KXC D/E	110	D E

PTAL Location

2

Route	Closest bus stop existing	distance	to include in PTAL Scenario	Closest bus stop future	distance	to include in PTAL Scenario
10	E	610	A B C	KXC D/E	150	D E
17	G	720	NO	G	720	NO
30	E	610	A B C	E	610	D E
31	Camden	too far	NO	KXC D/E	150	D E
45	D	610	A B C	D	610	D E
46	D G	610	A B C	KXC D/E	150	D E
63	D	610	A B C	D	610	D E
73	E	610	A B C	E	610	D E
91	D	610	A B C	D	610	D E
153	Angel	too far	NO	Angel	too far	NO
205	E	610	A B C	E	610	D E
214	E G	610	A B C	KXC D/E	150	D E
259	G	720	NO	G	720	NO
274	Agar Grove	too far	NO	Agar Grove	too far	NO
390	York Way	230	A B C	KXC F/G	80	D E
394	Pentonville Rd	too far	NO	Pentonville Rd	too far	NO
476	E	610	A B C	E	610	D E
New Route	N/A	N/A	NO	KXC D/E	150	D E

PTAL Location

3

Route	Closest bus stop existing	distance	to include in PTAL Scenario	Closest bus stop future	distance	to include in PTAL Scenario
10	E	too far	NO	KXC H/I	210	D E
17	G	too far	NO	G	680	NO
30	E	too far	NO	E	790	NO
31	Camden	too far	NO	KXC H/I	210	D E
45	D	too far	NO	D	790	NO
46	D G	too far	NO	KXC D/E	400	D E
63	D	too far	NO	D	790	NO
73	E	too far	NO	E	790	NO
91	D	too far	NO	D	790	NO
153	Angel	too far	NO	Angel	Too Far	NO
205	E	too far	NO	E	790	NO
214	E G	too far	NO	KXC D/E	400	D E
259	G	too far	NO	G	680	NO
274	Agar Grove	too far	NO	Agar Grove	780	NO
390	York Way	170	B C	KXC F/G	210	D E
394	Pentonville Rd	too far	NO	Pentonville Rd	too far	NO
476	E	too far	NO	E	790	NO
New Route	N/A	N/A	NO	KXC H/I	210	D E

PTAL Location

4

Route	Closest bus stop existing	distance	to include in PTAL Scenario	Closest bus stop future	distance	to include in PTAL Scenario
10	E	too far	NO	KXC H/I	120	D E
17	G	too far	NO	G	too far	NO
30	E	too far	NO	E	too far	NO
31	Camden	too far	NO	KXC H/I	120	D E
45	D	too far	NO	D	too far	NO
46	D G	too far	NO	KXC E/D	510	D E
63	D	too far	NO	D	too far	NO
73	E	too far	NO	E	too far	NO
91	D	too far	NO	D	too far	NO
153	Angel	too far	NO	Angel	too far	NO
205	E	too far	NO	E	too far	NO
214	E G	too far	NO	KXC E/D	510	D E
259	G	too far	NO	G	too far	NO
274	Agar Grove	550	B C	Agar Grove	550	D E
390	York Way	170	B C	York Way	170	D E
394	Pentonville Rd	too far	NO	Pentonville Rd	too far	NO
476	E	too far	NO	E	too far	NO
New Route	N/A	N/A	NO	KXC H/I	120	D E

PTAL Location

5

Route	Closest bus stop existing	distance	to include in PTAL Scenario	Closest bus stop future	distance	to include in PTAL Scenario
10	E	too far	NO	KXC J/K	70	D E
17	G	too far	NO	G	too far	NO
30	E	too far	NO	E	too far	NO
31	Camden	too far	NO	KXC J/K	70	D E
45	D	too far	NO	D	too far	NO
46	D G	too far	NO	KXC E/D	too far	NO
63	D	too far	NO	D	too far	NO
73	E	too far	NO	E	too far	NO
91	D	too far	NO	D	too far	NO
153	Angel	too far	NO	Angel	too far	NO
205	E	too far	NO	E	too far	NO
214	E G	too far	NO	KXC E/D	too far	NO
259	G	too far	NO	G	too far	NO
274	Agar Grove	540	B C	Agar Grove	540	D E
390	York Way	250	B C	York Way	250	D E
394	Pentonville Rd	too far	NO	Pentonville Rd	too far	NO
476	E	too far	NO	E	too far	NO
New Route	N/A	N/A	NO	KXC J/K	70	D E

PTAL Location

6

Route	Closest bus stop existing	distance	to include in PTAL Scenario	Closest bus stop future	distance	to include in PTAL Scenario
10	E	too far	NO	KXC J/K	200	D E
17	G	too far	NO	G	too far	NO
30	E	too far	NO	E	too far	NO
31	Camden	too far	NO	KXC J/K	200	D E
45	D	too far	NO	D	too far	NO
46	D G	too far	NO	KXC E/D	too far	NO
63	D	too far	NO	D	too far	NO
73	E	too far	NO	E	too far	NO
91	D	too far	NO	D	too far	NO
153	Angel	too far	NO	Angel	too far	NO
205	E	too far	NO	E	too far	NO
214	E G	too far	NO	KXC E/D	too far	NO
259	G	too far	NO	G	too far	NO
274	Agar Grove	450	B C	Agar Grove	450	D E
390	York Way	150	B C	York Way	150	D E
394	Pentonville Rd	too far	NO	Pentonville Rd	too far	NO
476	E	too far	NO	E	too far	NO
New Route	N/A	N/A	NO	KXC J/K	200	D E

LOCATION		Walk speed		80 m/min		Reliability bus		2 min		Reliability rail		0.75 min	
1													
BASE SERVICES NO DIVERSIONS													
Mode	Details (route no. / destination)	Route locn	Dist from centroid/ metres	Route freq serv/hr	Headway 60/freq	Walk time dist/walk spd	SWT 0.5 headway + reliability	Access time Walk time +SWT	Weight 1 lowest access time	EDF 30/SWT	EDF*weight	Acc index	
Bus	10	existing	470	12	5.0	5.875	4.50	10.38	0.5	2.892	1.446		
	17	existing	570	8	7.5	7.125	5.75	12.88	0.5	2.330	1.165		
	30	existing	470	8	7.5	5.875	5.75	11.63	0.5	2.581	1.290		
	45	existing	470	8	7.5	5.875	5.75	11.63	0.5	2.581	1.290		
	46	existing	470	7	8.6	5.875	6.29	12.16	0.5	2.467	1.233		
	63	existing	470	11	5.5	5.875	4.73	10.60	0.5	2.830	1.415		
	73	existing	470	17	3.5	5.875	3.76	9.64	1.0	3.112	3.112		
	91	existing	470	9	6.7	5.875	5.33	11.21	0.5	2.677	1.338		
	205	existing	470	8	7.5	5.875	5.75	11.63	0.5	2.581	1.290		
	214	existing	470	11	5.5	5.875	4.73	10.60	0.5	2.830	1.415		
	259	existing	570	7	8.6	7.125	6.29	13.41	0.5	2.237	1.119		
	390	existing	410	10	6.0	5.125	5.00	10.13	0.5	2.963	1.481		
	476	existing	470	9	6.7	5.875	5.33	11.21	0.5	2.677	1.338		
SUB-TOTAL											18.934		
LUL	Victoria		50	33	1.8	0.625	1.66	2.28	0.5	13.134	6.567		
	Northern		50	25	2.4	0.625	1.95	2.58	0.5	11.650	5.825		
	Picadilly		50	30	2.0	0.625	1.75	2.38	0.5	12.632	6.316		
	Hammersmith, Circle & Met		50	34	1.8	0.625	1.63	2.26	1.0	13.290	13.290		
SUB-TOTAL											31.998		
Rail	East coast mainline		220	16	3.75	2.75	2.625	5.375	0.5	5.581	2.791		
	Thameslink		210	24	2.5	2.625	2	4.625	1.0	6.486	6.486		
	Midland Mainline		210	5	12	2.625	6.75	9.375	0.5	3.200	1.600		
	CTRL international		210	7	8.571429	2.625	5.035714286	7.660714286	0.5	3.916	1.958		
	CTRL domestic		210	8	7.5	2.625	4.5	7.125	0.5	4.211	2.105		
SUB-TOTAL											14.940		
TOTAL											65.872		

LOCATION		Walk speed	80 m/min									
2		Reliability bus	2 min									
		Reliability rail	0.75 min									
BASE SERVICES NO DIVERSIONS												
Mode	Details (route no. / destination)	Route locn	Dist from centroid/point metres	Route freq total serv/hr	Headway 60/freq	Walk time dist/walk + spd	SWT 0.5 headway + reliability	Access time Walk time +SWT	Weight 1 lowest access time	EDF 30/SWT	EDF*weight	Acc index
Bus	10	existing	610	12	5.0	7.625	4.50	12.13	0.5	2.474	1.237	
	30	existing	610	8	7.5	7.625	5.75	13.38	0.5	2.243	1.121	
	45	existing	610	8	7.5	7.625	5.75	13.38	0.5	2.243	1.121	
	46	existing	610	7	8.6	7.625	6.29	13.91	0.5	2.157	1.078	
	63	existing	610	11	5.5	7.625	4.73	12.35	0.5	2.429	1.214	
	73	existing	610	17	3.5	7.625	3.76	11.39	0.5	2.634	1.317	
	91	existing	610	9	6.7	7.625	5.33	12.96	0.5	2.315	1.158	
	205	existing	610	8	7.5	7.625	5.75	13.38	0.5	2.243	1.121	
	214	existing	610	11	5.5	7.625	4.73	12.35	0.5	2.429	1.214	
	390	existing	230	10	6.0	2.875	5.00	7.88	1.0	3.810	3.810	
	476	existing	610	9	6.7	7.625	5.33	12.96	0.5	2.315	1.158	
SUB-TOTAL											15.550	
LUL	Victoria		290	33	1.8	3.625	1.66	5.28	0.5	5.677	2.839	
	Northern		290	25	2.4	3.625	1.95	5.58	0.5	5.381	2.691	
	Picadilly		290	30	2.0	3.625	1.75	5.38	0.5	5.581	2.791	
	Hammersmith, Circle & Met		290	34	1.8	3.625	1.63	5.26	1.0	5.706	5.706	
SUB-TOTAL											14.026	
Rail	East coast mainline		430	16	3.75	5.375	2.625	8	1.0	3.750	3.750	
	Thameslink		510	24	2.5	6.375	2	8.375	0.5	3.582	1.791	
	Midland Mainline		510	5	12	6.375	6.75	13.125	0.5	2.286	1.143	
	CTRL international		510	7	8.571429	6.375	5.035714286	11.41071429	0.5	2.629	1.315	
	CTRL domestic		510	8	7.5	6.375	4.5	10.875	0.5	2.759	1.379	
SUB-TOTAL											9.378	
TOTAL											38.954	

LOCATION		Walk speed	80 m/min								
3		Reliability bus	2 min								
		Reliability rail	0.75 min								
BASE SERVICES NO DIVERSIONS											
Mode	Details (route no. / destination)	Route locn	Dist from centroid/point metres	Route freq total serv/hr	Headway 60/freq	Walk time dist/walk spd	SWT 0.5 headway + reliability	Access time Walk time +SWT	Weight 1 lowest access time	EDF 30/SWT	Acc index EDF*weight
	390	existing	170	10	6.0	2.125	5.00	7.13	1.0	4.211	4.211
SUB-TOTAL											4.211
LUL	Victoria		540	33	1.8	6.75	1.66	8.41	0.5	3.568	1.784
	Northern		540	25	2.4	6.75	1.95	8.70	0.5	3.448	1.724
	Picadilly		540	30	2.0	6.75	1.75	8.50	0.5	3.529	1.765
	Hammersmith, Circle & Met		540	34	1.8	6.75	1.63	8.38	1.0	3.579	3.579
SUB-TOTAL											8.852
Rail	East coast mainline		690	16	3.75	8.625	2.625	11.25	1.0	2.667	2.667
	Thameslink		750	24	2.5	9.375	2	11.375	0.5	2.637	1.319
	Midland Mainline		750	5	12	9.375	6.75	16.125	0.5	1.860	0.930
	CTRL international		750	7	8.571429	9.375	5.035714286	14.41071429	0.5	2.082	1.041
	CTRL domestic		750	8	7.5	9.375	4.5	13.875	0.5	2.162	1.081
SUB-TOTAL											7.038
TOTAL											20.100

LOCATION		Walk speed	80 m/min								
4		Reliability bus	2 min								
		Reliability rail	0.75 min								
BASE SERVICES NO DIVERSIONS											
Mode	Details (route no. / destination)	Route locn	Dist from centroid/point metres	Route freq total serv/hr	Headway 60/freq	Walk time dist/walk spd	SWT 0.5 headway + reliability	Access time Walk time +SWT	Weight 1 lowest access time	EDF 30/SWT	Acc index EDF*weight
	274	existing	550	11	5.5	6.875	4.73	11.60	0.5	2.586	1.293
	390	existing	170	10	6.0	2.125	5.00	7.13	1.0	4.211	4.211
SUB-TOTAL											5.503
LUL	Victoria		660	33	1.8	8.25	1.66	9.91	0.5	3.028	1.514
	Northern		660	25	2.4	8.25	1.95	10.20	0.5	2.941	1.471
	Picadilly		660	30	2.0	8.25	1.75	10.00	0.5	3.000	1.500
	Hammersmith, Circle & Met		660	34	1.8	8.25	1.63	9.88	1.0	3.036	3.036
SUB-TOTAL											7.520
Rail	East coast mainline		810	16	3.75	10.125	2.625	12.75	1.0	2.353	2.353
	Thameslink		900	24							
	Midland Mainline		900	5							
	CTRL international		900	7	8.571429	11.25	5.035714286	16.28571429	0.5	1.842	0.921
	CTRL domestic		900	8	7.5	11.25	4.5	15.75	0.5	1.905	0.952
SUB-TOTAL											4.226
TOTAL											17.250

LOCATION		Walk speed	80 m/min								
5		Reliability bus	2 min								
		Reliability rail	0.75 min								
BASE SERVICES NO DIVERSIONS											
Mode	Details (route no. / destination)	Route locn	Dist from centroid/point <i>metres</i>	Route freq total <i>serv/hr</i>	Headway 60/freq	Walk time dist/walk spd	SWT 0.5 headway + reliability	Access time Walk time +SWT	Weight 1 lowest access time	EDF 30/SWT	Acc index EDF*weight
	274		540	11	5.5	6.75	4.73	11.48	0.5	2.614	1.307
	390		250	10	6.0	3.125	5.00	8.13	1.0	3.692	3.692
SUB-TOTAL											4.999
LUL	Victoria		950	33	1.8	11.875	1.66	13.53	0.5	2.217	1.108
	Northern		950	25	2.4	11.875	1.95	13.83	0.5	2.170	1.085
	Picadilly		950	30	2.0	11.875	1.75	13.63	0.5	2.202	1.101
	Hammersmith, Circle & Met		950	34	1.8	11.875	1.63	13.51	1.0	2.221	2.221
SUB-TOTAL											5.515
Rail	East coast mainline										
	Thameslink										
	Midland Mainline										
	CTRL international										
	CTRL domestic										
SUB-TOTAL											0.000
TOTAL											10.514

LOCATION		Walk speed	80 m/min								
6		Reliability bus	2 min								
		Reliability rail	0.75 min								
BASE SERVICES NO DIVERSIONS											
Mode	Details (route no. / destination)	Route locn	Dist from centroid/point metres	Route freq total serv/hr	Headway 60/freq dist/walk spd	Walk time	SWT 0.5 headway + reliability	Access time Walk time +SWT	Weight 1 lowest access time	EDF 30/SWT	Acc index EDF*weight
	274		450	11	5.5	5.625	4.73	10.35	0.5	2.898	1.449
	390		150	10	6.0	1.875	5.00	6.88	1.0	4.364	4.364
SUB-TOTAL											5.813
LUL	Victoria		940	33	1.8	11.75	1.66	13.41	0.5	2.237	1.119
	Northern		940	25	2.4	11.75	1.95	13.70	0.5	2.190	1.095
	Picadilly		940	30	2.0	11.75	1.75	13.50	0.5	2.222	1.111
	Hammersmith, Circle & Met		940	34	1.8	11.75	1.63	13.38	1.0	2.242	2.242
SUB-TOTAL											5.566
Rail	East coast mainline										
	Thameslink										
	Midland Mainline										
	CTRL international										
	CTRL domestic										
SUB-TOTAL											0.000
TOTAL											11.379

SUMMARY

BASE SERVICES NO DIVERSIONS		
Location	Acc index	PTAL
1	65.9	6
2	39.0	6
3	20.1	5
4	17.2	4
5	10.5	3
6	11.4	3

LOCATION		Walk speed	80 m/min								
1		Reliability bus	2 min								
		Reliability rail	0.75 min								
BASE SERVICES WITH DIVERSIONS											
Mode	Details (route no. / destination)	Route locn	Dist from centroid/point metres	Route freq total serv/hr	Headway 60/freq	Walk time dist/walk spd	SWT 0.5 headway + reliability	Access time Walk time +SWT	Weight 1 lowest access time	EDF 30/SWT	Acc index EDF*weight
Bus	10	diverted	110	12	5.0	1.375	4.50	5.88	0.5	5.106	2.553
	17	existing	570	8	7.5	7.125	5.75	12.88	0.5	2.330	1.165
	30	existing	470	8	7.5	5.875	5.75	11.63	0.5	2.581	1.290
	31	diverted	110	17	3.5	1.375	3.76	5.14	1.0	5.837	5.837
	45	existing	470	8	7.5	5.875	5.75	11.63	0.5	2.581	1.290
	46	existing	110	7	8.6	1.375	6.29	7.66	0.5	3.916	1.958
	63	existing	470	11	5.5	5.875	4.73	10.60	0.5	2.830	1.415
	73	existing	470	17	3.5	5.875	3.76	9.64	0.5	3.112	1.556
	91	existing	470	9	6.7	5.875	5.33	11.21	0.5	2.677	1.338
	205	existing	470	8	7.5	5.875	5.75	11.63	0.5	2.581	1.290
	214	existing	110	11	5.5	1.375	4.73	6.10	0.5	4.916	2.458
	259	existing	570	7	8.6	7.125	6.29	13.41	0.5	2.237	1.119
	390	diverted	70	10	6.0	0.875	5.00	5.88	0.5	5.106	2.553
476	existing	470	9	6.7	5.875	5.33	11.21	0.5	2.677	1.338	
SUB-TOTAL											27.161
LUL	Victoria		50	33	1.8	0.625	1.66	2.28	0.5	13.134	6.567
	Northern		50	25	2.4	0.625	1.95	2.58	0.5	11.650	5.825
	Picadilly		50	30	2.0	0.625	1.75	2.38	0.5	12.632	6.316
	Hammersmith, Circle & Met		50	34	1.8	0.625	1.63	2.26	1.0	13.290	13.290
SUB-TOTAL											31.998
Rail	East coast mainline		220	16	3.75	2.75	2.625	5.375	0.5	5.581	2.791
	Thameslink		210	24	2.5	2.625	2	4.625	1.0	6.486	6.486
	Midland Mainline		210	5	12	2.625	6.75	9.375	0.5	3.200	1.600
	CTRL international		210	7	8.571429	2.625	5.035714286	7.660714286	0.5	3.916	1.958
	CTRL domestic		210	8	7.5	2.625	4.5	7.125	0.5	4.211	2.105
SUB-TOTAL											14.940
TOTAL											74.100

LOCATION		Walk speed	80 m/min								
2		Reliability bus	2 min								
		Reliability rail	0.75 min								
BASE SERVICES WITH DIVERSIONS											
Mode	Details (route no. / destination)	Route locn	Dist from centroid/point metres	Route freq total serv/hr	Headway 60/freq	Walk time dist/walk spd	SWT 0.5 headway + reliability	Access time Walk time +SWT	Weight 1 lowest access time	EDF 30/SWT	Acc index EDF*weight
Bus	10		150	12	5.0	1.875	4.50	6.38	0.5	4.706	2.353
	30		610	8	7.5	7.625	5.75	13.38	0.5	2.243	1.121
	31		150	17	3.5	1.875	3.76	5.64	1.0	5.319	5.319
	45		610	8	7.5	7.625	5.75	13.38	0.5	2.243	1.121
	46		150	7	8.6	1.875	6.29	8.16	0.5	3.676	1.838
	63		610	11	5.5	7.625	4.73	12.35	0.5	2.429	1.214
	73		610	17	3.5	7.625	3.76	11.39	0.5	2.634	1.317
	91		610	9	6.7	7.625	5.33	12.96	0.5	2.315	1.158
	205		610	8	7.5	7.625	5.75	13.38	0.5	2.243	1.121
	214		150	11	5.5	1.875	4.73	6.60	0.5	4.544	2.272
	390		80	10	6.0	1	5.00	6.00	0.5	5.000	2.500
	476		610	9	6.7	7.625	5.33	12.96	0.5	2.315	1.158
SUB-TOTAL											22.493
LUL	Victoria		290	33	1.8	3.625	1.66	5.28	0.5	5.677	2.839
	Northern		290	25	2.4	3.625	1.95	5.58	0.5	5.381	2.691
	Picadilly		290	30	2.0	3.625	1.75	5.38	0.5	5.581	2.791
	Hammersmith, Circle & Met		290	34	1.8	3.625	1.63	5.26	1.0	5.706	5.706
SUB-TOTAL											14.026
Rail	East coast mainline		430	16	3.75	5.375	2.625	8	1.0	3.750	3.750
	Thameslink		510	24	2.5	6.375	2	8.375	0.5	3.582	1.791
	Midland Mainline		510	5	12	6.375	6.75	13.125	0.5	2.286	1.143
	CTRL international		510	7	8.571429	6.375	5.035714286	11.41071429	0.5	2.629	1.315
	CTRL domestic		510	8	7.5	6.375	4.5	10.875	0.5	2.759	1.379
SUB-TOTAL											9.378
TOTAL											45.897

LOCATION		Walk speed	80 m/min								
3		Reliability bus	2 min								
		Reliability rail	0.75 min								
BASE SERVICES WITH DIVERSIONS											
Mode	Details (route no. / destination)	Route locn	Dist from centroid/point metres	Route freq total serv/hr	Headway 60/freq	Walk time dist/walk spd	SWT 0.5 headway + reliability	Access time Walk time +SWT	Weight 1 lowest access time	EDF 30/SWT	Acc index EDF*weight
Bus	10		210	12	5.0	2.625	4.50	7.13	0.5	4.211	2.105
	31		210	17	3.5	2.625	3.76	6.39	1.0	4.695	4.695
	46		400	7	8.6	5	6.29	11.29	0.5	2.658	1.329
	214		400	11	5.5	5	4.73	9.73	0.5	3.084	1.542
	390		210	10	6.0	2.625	5.00	7.63	0.5	3.934	1.967
SUB-TOTAL											11.639
LUL	Victoria		540	33	1.8	6.75	1.66	8.41	0.5	3.568	1.784
	Northern		540	25	2.4	6.75	1.95	8.70	0.5	3.448	1.724
	Picadilly		540	30	2.0	6.75	1.75	8.50	0.5	3.529	1.765
	Hammersmith, Circle & Met		540	34	1.8	6.75	1.63	8.38	1.0	3.579	3.579
SUB-TOTAL											8.852
Rail	East coast mainline		690	16	3.75	8.625	2.625	11.25	1.0	2.667	2.667
	Thameslink		750	24	2.5	9.375	2	11.375	0.5	2.637	1.319
	Midland Mainline		750	5	12	9.375	6.75	16.125	0.5	1.860	0.930
	CTRL international		750	7	8.571429	9.375	5.035714286	14.41071429	0.5	2.082	1.041
	CTRL domestic		750	8	7.5	9.375	4.5	13.875	0.5	2.162	1.081
SUB-TOTAL											7.038
TOTAL											27.528

LOCATION		Walk speed	80 m/min								
4		Reliability bus	2 min								
		Reliability rail	0.75 min								
BASE SERVICES WITH DIVERSIONS											
Mode	Details (route no. / destination)	Route locn	Dist from centroid/point metres	Route freq total serv/hr	Headway 60/freq spd	Walk time dist/walk spd	SWT 0.5 headway + reliability	Access time Walk time +SWT	Weight 1 lowest access time	EDF 30/SWT	Acc index EDF*weight
Bus	10		120	12	5.0	1.5	4.50	6.00	0.5	5.000	2.500
	31		120	17	3.5	1.5	3.76	5.26	1.0	5.698	5.698
	46		510	7	8.6	6.375	6.29	12.66	0.5	2.370	1.185
	214		510	11	5.5	6.375	4.73	11.10	0.5	2.702	1.351
	274		550	11	5.5	6.875	4.73	11.60	0.5	2.586	1.293
	390		170	10	6.0	2.125	5.00	7.13	0.5	4.211	2.105
SUB-TOTAL											14.132
LUL	Victoria		660	33	1.8	8.25	1.66	9.91	0.5	3.028	1.514
	Northern		660	25	2.4	8.25	1.95	10.20	0.5	2.941	1.471
	Picadilly		660	30	2.0	8.25	1.75	10.00	0.5	3.000	1.500
	Hammersmith, Circle & Met		660	34	1.8	8.25	1.63	9.88	1.0	3.036	3.036
SUB-TOTAL											7.520
Rail	East coast mainline		810	16	3.75	10.125	2.625	12.75	1.0	2.353	2.353
	Thameslink		900	24	2.5	11.25	2	13.25	0.5	2.264	1.132
	Midland Mainline		900	5	12	11.25	6.75	18	0.5	1.667	0.833
	CTRL international		900	7	8.571429	11.25	5.035714286	16.28571429	0.5	1.842	0.921
	CTRL domestic		900	8	7.5	11.25	4.5	15.75	0.5	1.905	0.952
SUB-TOTAL											6.192
TOTAL											27.844

LOCATION		Walk speed	80 m/min								
5		Reliability bus	2 min								
		Reliability rail	0.75 min								
BASE SERVICES WITH DIVERSIONS											
Mode	Details (route no. / destination)	Route locn	Dist from centroid/point metres	Route freq total serv/hr	Headway 60/freq spd	Walk time dist/walk spd	SWT 0.5 headway + reliability	Access time Walk time +SWT	Weight 1 lowest access time	EDF 30/SWT	Acc index EDF*weight
Bus	10		70	12	5.0	0.875	4.50	5.38	0.5	5.581	2.791
	31		70	17	3.5	0.875	3.76	4.64	1.0	6.466	6.466
	274		540	11	5.5	6.75	4.73	11.48	0.5	2.614	1.307
	390		250	10	6.0	3.125	5.00	8.13	0.5	3.692	1.846
SUB-TOTAL											12.410
LUL	Victoria		950	33	1.8	11.875	1.66	13.53	0.5	2.217	1.108
	Northern		950	25	2.4	11.875	1.95	13.83	0.5	2.170	1.085
	Picadilly		950	30	2.0	11.875	1.75	13.63	0.5	2.202	1.101
	Hammersmith, Circle & Met		950	34	1.8	11.875	1.63	13.51	1.0	2.221	2.221
SUB-TOTAL											5.515
Rail	East coast mainline										
	Thameslink										
	Midland Mainline										
	CTRL international										
	CTRL domestic										
SUB-TOTAL											0.000
TOTAL											17.925

LOCATION		Walk speed	80 m/min								
6		Reliability bus	2 min								
		Reliability rail	0.75 min								
BASE SERVICES WITH DIVERSIONS											
Mode	Details (route no. / destination)	Route locn	Dist from centroid/point <i>metres</i>	Route freq total <i>serv/hr</i>	Headway 60/freq	Walk time dist/walk spd	SWT 0.5 headway + reliability	Access time Walk time +SWT	Weight 1 lowest access time	EDF 30/SWT	Acc index EDF*weight
Bus	10		200	12	5.0	2.5	4.50	7.00	0.5	4.286	2.143
	31		200	17	3.5	2.5	3.76	6.26	1.0	4.789	4.789
	274		450	11	5.5	5.625	4.73	10.35	0.5	2.898	1.449
	390		150	10	6.0	1.875	5.00	6.88	0.5	4.364	2.182
	SUB-TOTAL										
LUL	Victoria		940	33	1.8	11.75	1.66	13.41	0.5	2.237	1.119
	Northern		940	25	2.4	11.75	1.95	13.70	0.5	2.190	1.095
	Picadilly		940	30	2.0	11.75	1.75	13.50	0.5	2.222	1.111
	Hammersmith, Circle & Met		940	34	1.8	11.75	1.63	13.38	1.0	2.242	2.242
SUB-TOTAL											5.566
Rail	East coast mainline										
	Thameslink										
	Midland Mainline										
	CTRL international										
	CTRL domestic										
SUB-TOTAL											0.000
TOTAL											16.129

SUMMARY

BASE SERVICES WITH DIVERSIONS		
Location	Acc index	PTAL
1	74.1	6
2	45.9	6
3	27.5	6
4	27.8	6
5	17.9	4
6	16.1	4