

Aberdeenshire LDP Allocations

Settlement	Prev LDP c/f	2007 - 2016	2017 - 2023	Employment	Direction from Lk	census ward	GFA if 30% usable to 2023	2024-2030
Woodland of Durris	20				nw	58		
Portlethen				22 ha	n	59	66,000	
Marywell	120				n	59		
Elsick		1845	2200	11.5 - 17	n	61	34,500	16,500
Newtonhill	35	50	20	11.5 - 17	n	61	34,500	16,500
Auchenblae	10	40	40	1	n	65	3,000	
Drumlithie		15	15	0.5	n	65	1,500	
Roadside of Kinneff		15	15		ne	65		
Fourdoun		15			n	66		
Laurencekirk	220	485	400	11 - 27	e	66	33,000	48,000
Gourdon		25	10		e	67	9,000	
Johnshaven	67				e	67		
Inverbervie		130	100		ne	67		
St Cyrus/Lochside	15	65	60		e	68	6,000	
Edzell Woods		150	150	100	s	68	300,000	
Luthermuir	25	25	25	0.5	s	68	1,500	
Marykirk	19	15	15	0.5	se	68 use A937-Lk	1,500	
Fettercairn		15	15		w	68 use B9120-Lk		
Stonehaven		240	150	8	n	62-64	24,000	

APPENDIX 2

Note: New Esk plan application has a further 700 houses from 2024 to 2030

There is a danger that people trips and mode share rates discount the internal trips, then using census data for car drivers to work double discounts this?

	AM		PM	
	IN	OUT	IN	OUT
Trip Generation Rates:				
JMP Study people trips	0.207	1.01	0.692	0.43
Car trips (44% mode)	0.091	0.444	0.304	0.189
Car trips (56% mode)	0.116	0.566	0.388	0.241 (Use for dev >250 ho)
ie 61% minus 5% rail				

Blackiemore Ave TA	0.165	0.483	0.467	0.269 (Use for dev <250 ho)
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New Esk TA				
veh trips from TRICS	0.16	0.59	0.53	0.24
people trips+72% mode	0.18	0.569	0.463	0.328

Employment trip Rates				
JMP assume 30% density and business park trip rates and apply 57% mode share for car drivers				(they only however used 3% density so trips are one tenth of what they should be)
business park/100m2	1.328	0.239	0.163	1.077 (use for all employment allocations)

New Esk assumes 10% density for business and for storage and distribution and 40% for Industrial (General)				
then 72% mode share by car				
business park	1.458	0.191	0.263	1.225
general industry	0.407	0.201	0.231	0.384

They also quoted TRICS rates for vehicles per 100 sq m gfa	hectares	GFA if 30% usable
business park	1.64	0.25
general industry	0.65	0.24
storage and distribution	0.298	0.443
	0.24	0.65
	0.583	0.391
	1	3000
	14	42000
	85	255000

based on census data from ward 59 Portlethen North (this was taken due to the employment it has in comparison with Newtonhill in 2001 to reflect potential trips if employment here)
trips to this zone (ie AM in nbd/PM out sbd) employment: NOTE that some generated trips may be met from Newtonhill Housing so this impact is reflective of the worst case:

	Employment	Employment				Strategic Reserve Employment			
		AM In	AM Out	PM In	PM Out	AM In	AM Out	PM In	PM Out
Newtonhill Employment	%	458	82	56	372	219	39	27	178
66 Mearns - L'kirk	1.4	6	1	1	5	3	1	0	2
67 St Cyrus/J'hvn/Gdn	2.7	12	2	2	10	6	1	1	5
68 + Angus	6.2	28	5	3	23	14	2	2	11
									147

based on census data from ward 65 Mearns North trips from these zones (ie AM out sbd/PM in nbd) residential:

	Housing	2007 - 2016				2017-2023			
		AM In	AM Out	PM In	PM Out	AM In	AM Out	PM In	PM Out
Housing		8	24	23	13	7	19	19	11
Auchenblae		2	7	7	4	2	7	7	4
Drumlithie		2	7	7	4	2	7	7	4
Roadside of Kinneff		2	7	7	4	2	7	7	4
Total		13	39	37	22	12	34	33	19
66 Mearns Lk'irk	4.9	1	2	2	1	1	2	2	1
67 St Cyrus/J'hvn/Gdn	1.2	0	0	0	0	0	0	0	0
68 + Angus	3.6	0	1	1	1	0	1	1	1
									20

trips to this zone (ie AM in nbd/PM out sbd) employment:

	Employment	Employment			
		AM In	AM Out	PM In	PM Out
Auchenblae		40	7	5	32
Drumlithie		20	4	2	16
Total Employment		60	11	7	48
66 Mearns Lk'irk	10.2	6	1	1	5
67 St Cyrus/J'hvn/Gdn	6.9	4	1	1	3
68 + Angus	23.1	14	2	2	11
					51

based on census data from ward 66 Mearns Central trips from these zones (ie AM out sbd/PM in nbd) residential:

	Housing	2007 - 2016				2017-2023			
		AM In	AM Out	PM In	PM Out	AM In	AM Out	PM In	PM Out
Housing		2	7	7	4				
Fourdown		2	7	7	4				
Gourdon		4	12	12	7	2	5	5	3
Total		7	19	19	11	2	5	5	3
66 Mearns Lk'irk	27.5	2	5	5	3	0	1	1	1
67 St Cyrus/J'hvn/Gdn	1.6	0	0	0	0	0	0	0	0
68 + Angus	15.8	1	3	3	2	0	1	1	0
									31

trips to this zone (ie AM in nbd/PM out sbd) employment:

	Employment	Employment			
		AM In	AM Out	PM In	PM Out
Gourdon		119	21	15	97
66 Mearns Lk'irk	41.1	49	9	6	40
67 St Cyrus/J'hvn/Gdn	4.4	5	1	1	4
68 + Angus	30.6	37	7	4	30
					193

based on census data from ward 68 Mearns South trips from these zones (ie AM out nbd/PM in sbd) residential:

	Housing	2007 - 2016				2017-2023			
		AM In	AM Out	PM In	PM Out	AM In	AM Out	PM In	PM Out
Housing		25	72	70	40	25	72	70	40
Edzell Woods		25	72	70	40	25	72	70	40
Luthermuir		8	24	23	13	4	12	12	7
Total		33	97	93	54	29	85	82	47
AC (n) and ACC	35.5	12	34	33	19	10	30	29	17
66 Mearns Lk'irk	7.6	3	7	7	4	2	6	6	4
67 St Cyrus/J'hvn/Gdn	2.5	1	2	2	1	1	2	2	1
									237

As a comparison - the figures from New Esk TA had:

Housing	phase 1				phase 2			
	AM In	AM Out	PM In	PM Out	AM In	AM Out	PM In	PM Out
27	85	69	49	27	85	69	49	
Trips to/from A90 n								
13	41	33	24	13	41	33	24	
26	82	66	48	26	82	66	48	phases 1 - 2
26	82	66	48	26	82	66	48	phases 1 - 3

if New Esk plan application for further 700 houses from 2024 to 2030 granted:

	Housing	2024 - 2030			
		AM In	AM Out	PM In	PM Out
Housing		116	338	327	188
Edzell Woods		116	338	327	188
AC (n) and ACC	35.5	41	120	116	67
66 Mearns Lk'irk	7.6	9	26	25	14
67 St Cyrus/J'hvn/Gdn	2.5	3	8	8	5

trips to this zone (ie AM in sbd/PM out nbd) employment:

	Employment				
	AM In	AM Out	PM In	PM Out	
Employment					
Edzell Woods	1073	1238	1592	1302	
Luthermuir	20	4	2	16	
Total	1093	1241	1595	1319	
AC (n) and ACC	5.0	55	62	80	66
66 Mearns Lk'irk	8.4	92	104	134	111
67 St Cyrus/J'hvn/Gdn	2.4	26	30	38	32

figures from New Esk TA had

Employer	phase 1			phase 2				
	AM In	AM Out	PM In	PM Out	AM In	AM Out	PM In	PM Out
	235	229	294	265	153	135	170	166
Total	54	53	68	61	35	31	39	38
Trips to/from A90 n	829	89	84	107	99 (phase 1 plus phase 2 ie all 300 houses)			

based on census data from ward 68 Mearns South trips from these zones (ie AM out nbd/PM in sbd) residential using B9120 or A937:

	Housing 2007 - 2016				Housing 2017-2023				
	AM In	AM Out	PM In	PM Out	AM In	AM Out	PM In	PM Out	
Housing									
St Cyrus/Lochside	13	39	37	22	10	29	28	16	
Marykirk	6	16	16	9	2	7	7	4	
Total	19	55	53	31	12	36	35	20	
AC (n) and ACC	35.5	7	20	19	11	4	13	12	7 Total in study area
66 Mearns Lk'irk	7.6	1	4	4	2	1	3	3	2 113

trips to this zone (ie AM in sbd/PM out nbd) employment using B9120 or A937:

	Employment				
	AM In	AM Out	PM In	PM Out	
Employment					
St Cyrus/Lochside	80	14	10	65	
Marykirk	20	4	2	16	
Total	100	18	12	81	
AC (n) and ACC	5.0	5	1	1	4 Total in study area
66 Mearns Lk'irk	8.4	8	2	1	7 28

based on census data from wards 63 and 64 Stonehaven central and south, trips from this zone (ie AM out sbd/PM in nbd) residential:

	Housing 2007 - 2016				Housing 2017-2023				
	AM In	AM Out	PM In	PM Out	AM In	AM Out	PM In	PM Out	
Stonehaven									
to	%	40	116	112	65	25	72	70	40
66 Mearns Lk'irk	1.0	0	1	1	1	0	1	1	0
67 St Cyrus/J'hvn/Gdn	0.8	0	1	1	1	0	1	1	0 Total in study area
68 + Angus	1.6	1	2	2	1	0	1	1	1 18

trips to this zone (ie AM in nbd/PM out sbd) industrial trips on A90

	AM In	AM Out	PM In	PM Out	
Stonehaven					
from ward	%	319	57	39	259
66 Mearns - L'kirk	4.5	14	3	2	12
67 St Cyrus/J'hvn/Gdn	6.7	21	4	3	17
68 + Angus	7.9	25	5	3	20
Total in study area					129

Alternatively, looking at the turning proportion at the junctions with the A90

	AM In	AM Out	PM In	PM Out
A90 N = Abdn	0.39	0.68	0.58	0.37
East =	0.25	0.11	0.2	0.27
A90 S = Brechin	0.36	0.21	0.22	0.36

based on census data from ward 66 Mearns Central, trips from this zone (ie AM out sbd/PM in nbd) residential:

	Housing 2007 - 2016				Housing 2017-2023				
	AM In	AM Out	PM In	PM Out	AM In	AM Out	PM In	PM Out	
Laurencekirk									
Fettercairn	2	7	7	4	2	7	7	4	
Total	84	406	281	174	49	234	162	100	
AC (n) and ACC	52.7	44	214	148	92	26	123	85	53
67 St Cyrus/J'hvn/Gdn	1.6	1	7	4	3	1	4	3	2 Total in study area
68 + Angus	15.8	13	64	44	27	8	37	26	16 1045

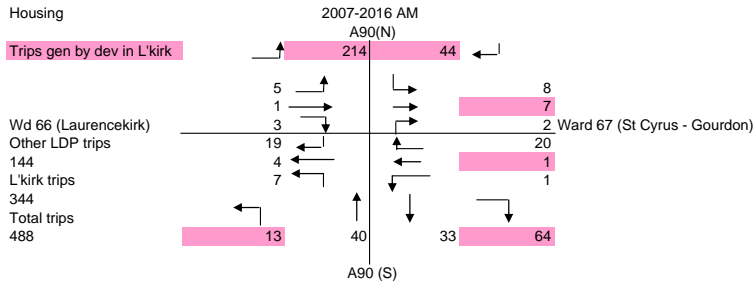
Applying to to/from north	AM In	AM Out	PM In	PM Out
east	33	276	163	64
south	21	45	56	47
	30	85	62	63

trips to this zone (ie AM in/PM out)

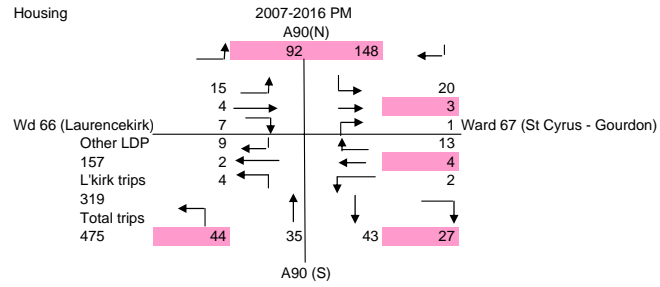
	Employment				Strategic Reserve Employment				
	AM In	AM Out	PM In	PM Out	AM In	AM Out	PM In	PM Out	
Laurencekirk Employment									
from ward	%	438	79	54	356	637	115	78	517
AC (n) and ACC	20.9	92	16	11	74	133	24	16	108
67 St Cyrus/J'hvn/Gdn	4.4	19	3	2	16	28	5	3	23 Total in study area
68 + Angus	30.6	134	24	16	109	195	35	24	158 1271
Total									4679 = overall total of all dev

Housing

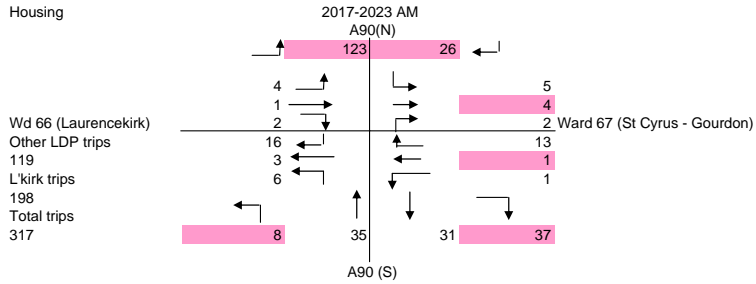
Trips gen by dev in L'kirk



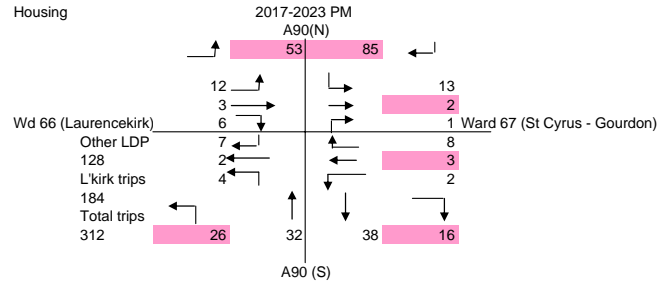
Housing



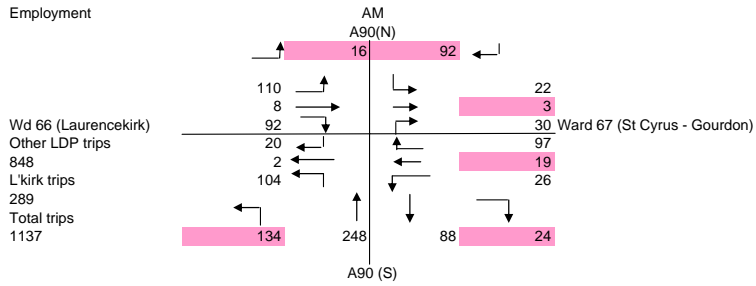
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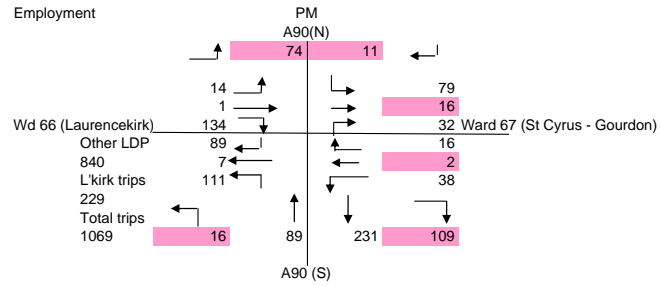
Housing



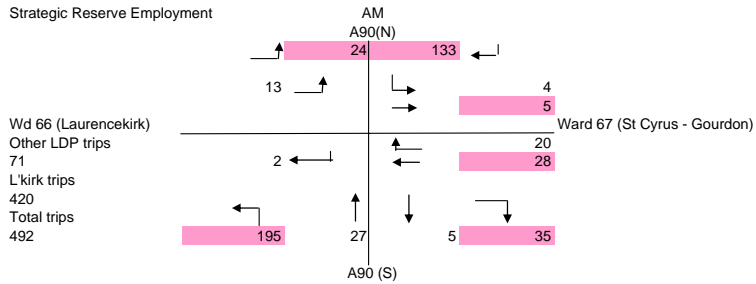
Employment



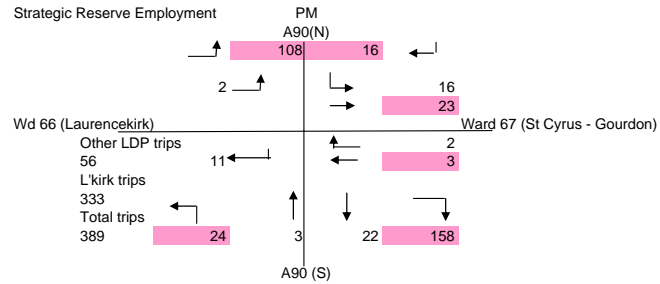
Employment



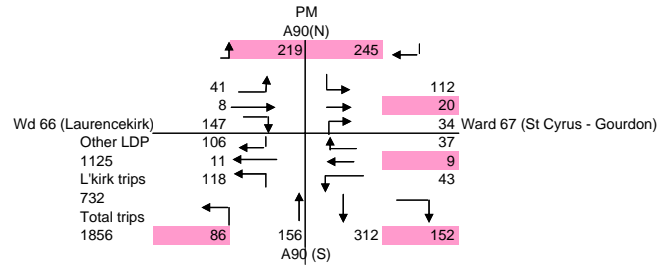
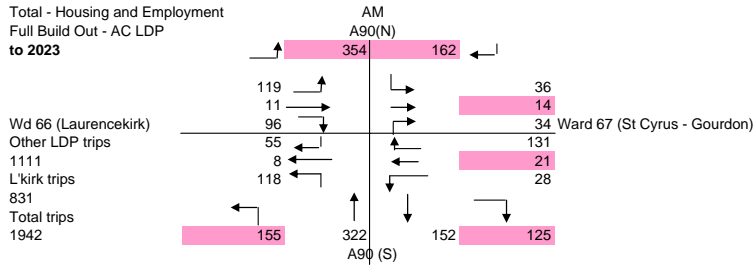
Strategic Reserve Employment



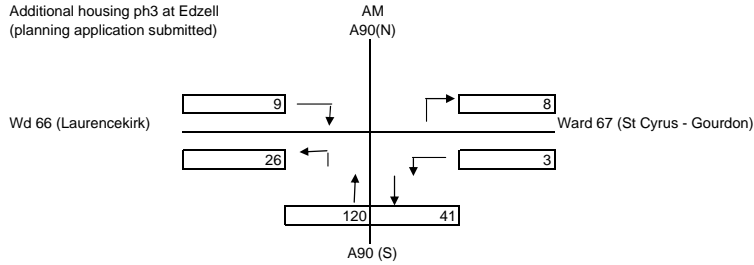
Strategic Reserve Employment



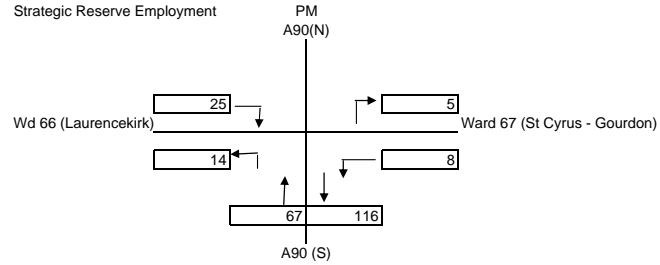
Total - Housing and Employment
Full Build Out - AC LDP
to 2023



Additional housing ph3 at Edzell
(planning application submitted)



Strategic Reserve Employment



AC LDP Allocations - excluding Laurencekirk

	AM peak 0700-0800							
	Staight ahead on A90	Turning onto/off A90	Crossing A90	Total	Nbd N of LK	Sbd N of LK	Nbd S of LK	Sbd S of LK
2007-2016 Housing	72	66	6	144	45	60	49	36
2017-2023 Housing	66	50	4	119	52	53	43	34
subtotal	138	116	9	263	96	113	93	70
Employment	336	502	10	848	456	130	382	206
subtotal to 2023	474	618	19	1111	552	243	475	276
Strat Reserve Employmnt	32	40	0	71	60	11	27	5
TOTAL	506	657	19	1182	613	254	502	281

PM peak 1700-1800

Staight ahead on A90	Turning onto/off A90	Crossing A90	Total	Nbd S of LK			
				Nbd N of LK	Sbd N of LK	Nbd S of LK	Sbd S of LK
79	72	6	157	51	72	41	52
70	54	4	128	52	59	37	46
149	126	11	285	103	131	77	99
320	512	8	840	118	399	231	403
468	638	18	1125	221	530	309	502
25	31	0	56	7	49	3	22
493	669	18	1181	229	579	312	524

ph 3 at Edzell	161	46	0	207	120	41	154	53
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183	52	0	235	67	116	86	149
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Laurencekirk Development

	AM peak 0700-0800							
	Staight ahead on A90	Turning onto/off A90	Crossing A90	Total	Nbd N of LK	Sbd N of LK	Nbd S of LK	Sbd S of LK
2007-2016 Housing		336	8	344	214	44	13	64
2017-2023 Housing		194	5	198	123	26	8	37
subtotal	0	530	12	542	337	70	21	101
Employment		266	23	289	16	92	134	24
subtotal to 2023	0	796	35	831	354	162	155	125
Strat Reserve Employmnt		387	33	420	24	133	195	35
TOTAL	0	1183	68	1251	378	295	350	160

PM peak 1700-1800

Staight ahead on A90	Turning onto/off A90	Crossing A90	Total	Nbd S of LK			
				Nbd N of LK	Sbd N of LK	Nbd S of LK	Sbd S of LK
	311	7	319	92	148	44	27
	180	4	184	53	85	26	16
0	491	11	503	145	233	70	43
	211	18	229	74	11	16	109
0	702	29	732	219	245	86	152
	307	26	333	108	16	24	158
0	1009	56	1064	327	261	110	310

Total AC LDP trip generation AM peak 0700-0800

	Staight ahead on A90	Turning onto/off A90	Crossing A90	Total	Nbd N of LK	Sbd N of LK	Nbd S of LK	Sbd S of LK
2007-2016 Housing	72	402	13	488	259	105	63	100
2017-2023 Housing	66	244	8	317	175	78	51	71
subtotal	138	645	22	805	434	183	114	171
Employment	336	768	33	1137	472	222	516	230
subtotal to 2023	474	1413	54	1942	906	405	630	401
Strat Reserve Employmnt	32	427	33	492	84	144	222	40
TOTAL	506	1840	87	2434	990	549	852	441

Staight ahead on A90	Turning onto/off A90	Crossing A90	Total	Nbd N of LK	Sbd N of LK	Nbd S of LK	Sbd S of LK
79	383	14	475	143	220	85	80
70	234	8	312	105	144	62	62
149	617	22	787	248	364	147	142
320	723	26	1069	193	410	248	512
468	1340	48	1856	440	774	395	654
25	338	26	389	115	65	27	180
493	1678	74	2245	556	840	422	834

A90 observed flows on day of Bear Study - 11 May 2009

	0700 -0800			1700 -1800		
	nbd	sbd	2-way	nbd	sbd	2-way
n of n jn	1663	429	2092	604	1312	1916
s of n jn	1506	381	1887	524	1135	1659
n of c jn	1498	370	1868	523	1142	1665
s of c jn	1484	387	1871	554	1167	1721
n of s jn	1509	397	1906	558	1173	1731
s of s jn	1383	364	1747	534	973	1507

Growthed to 2023 using NRTF low growth 13.90%

	0700 -0800			1700 -1800		
	nbd	sbd	2-way	nbd	sbd	2-way
n of n jn	1894	489	2383	688	1494	2182
s of s jn	1575	415	1990	608	1108	1716

Growthed to 2023 using NRTF central growth 19.90%

	0700 -0800			1700 -1800		
	nbd	sbd	2-way	nbd	sbd	2-way
n of n jn	1993	514	2507	724	1572	2296
s of s jn	1658	436	2094	640	1166	1806

Growthed to 2023 using NRTF high growth 24.90%

	0700 -0800			1700 -1800		
	nbd	sbd	2-way	nbd	sbd	2-way
n of n jn	2077	536	2613	755	1639	2393
s of s jn	1728	455	2182	667	1215	1883

Increased flow on A90 using NRTF low growth

	0700 -0800			1700 -1800		
	nbd	sbd	2-way	nbd	sbd	2-way
n of n jn	231	60	291	84	182	266
s of s jn	192	51	243	74	135	209

Increased flow on A90 using NRTF central growth

	0700 -0800			1700 -1800		
	nbd	sbd	2-way	nbd	sbd	2-way
n of n jn	330	85	415	120	260	380
s of s jn	275	72	347	106	193	299

Increased flow on A90 using NRTF high growth

	0700 -0800			1700 -1800		
	nbd	sbd	2-way	nbd	sbd	2-way
n of n jn	414	107	521	151	327	477
s of s jn	345	91	435	133	242	376

2009 2-way flows

	0700-0800	1700-1800
North of north junction	2092	1916
South of south junction	1747	1507

Housing 2007-2023

	AC LDP excl L'kirk		AC LDP Laurencekirk		total K&M LDP allocation	
	0700-0800	1700-1800	0700-0800	1700-1800	0700-0800	1700-1800
North of north junction	209	234	407	378	617	612
% increase from 2009	10.0	12.2	19.5	19.7	29.5	31.9
South of south junction	163	176	122	113	285	290
% increase from 2009	9.3	11.7	7.0	7.5	16.3	19.2

Employment 2007-2023

	AC LDP excl L'kirk		AC LDP Laurencekirk		total K&M LDP allocation	
	0700-0800	1700-1800	0700-0800	1700-1800	0700-0800	1700-1800
North of north junction	586	517	108	86	694	603
% increase from 2009	28.0	27.0	5.2	4.5	33.2	31.5
South of south junction	588	634	158	125	747	760
% increase from 2009	33.7	42.1	9.1	8.3	42.7	50.4

Housing + Employment 2007-2023

	AC LDP excl L'kirk		AC LDP Laurencekirk		total K&M LDP allocation	
	0700-0800	1700-1800	0700-0800	1700-1800	0700-0800	1700-1800
North of north junction	795	751	515	463	1311	1215
% increase from 2009	38.0	39.2	24.6	24.2	62.7	63.4
South of south junction	751	811	280	239	1031	1049
% increase from 2009	43.0	53.8	16.0	15.8	59.0	69.6

Housing + Employment Growth over and above growth predictions

	LOW GROWTH		MEDIUM GROWTH		HIGH GROWTH	
	total K&M LDP allocation		total K&M LDP allocation		total K&M LDP allocation	
	0700-0800	1700-1800	0700-0800	1700-1800	0700-0800	1700-1800
North of north junction	1020	948	895	834	789	737
% increase from 2009	48.8	49.5	42.8	43.5	37.7	38.5
South of south junction	789	840	684	750	596	674
% increase from 2009	45.1	55.7	39.2	49.8	34.1	44.7

2024 onwards Strategic Reserve Employment and 700 extra houses at Edzell

	AC LDP excl L'kirk		AC LDP Laurencekirk		total K&M LDP allocation	
	0700-0800	1700-1800	0700-0800	1700-1800	0700-0800	1700-1800
North of north junction	232	239	157	124	389	364
% increase from 2009	11.1	12.5	7.5	6.5	18.6	19.0
South of south junction	239	260	230	182	469	442
% increase from 2009	13.7	17.3	13.2	12.1	26.8	29.3