

Maidstone Transport Model

Local Plan Option Testing



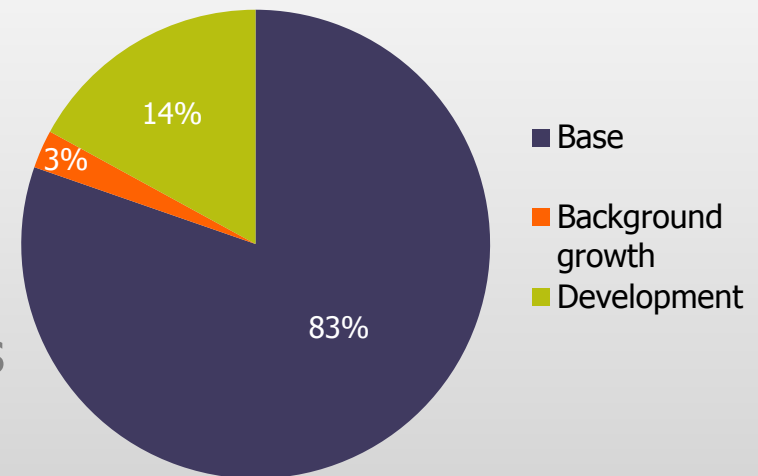
Model Characteristics – Key Outputs



- Weekday AM and PM peak periods modelled
- Travel demand
 - total person movements within modelled area
 - total vehicle movements within modelled area
- Overall network performance
 - Total travel distance (vehicle km)
 - Total travel time (vehicle hours)

General Comments

- Traffic growth = development traffic (83%) + socio-economic factors i.e. population growth/car ownership (17%)
- Interaction with neighbouring districts accounted for in the model



Forecast Scenario Summary



Interventions	2031 DM	2031 DS1	2031 DS2	2031 DS3	2031 DS4a	2031 DS4b
	17,381	17,381	17,381	16,247	18,560	18,560
Maidstone Gyrotory scheme	✓	✓	✓	✓	✓	✓
Highway improvements package	✗	✓	✓	✓	✓	✓
Leeds/Langley Link Rd	✗	✓	✗	✓	✓	✗
Increased bus frequency	✗	✗	✓ (7 mins)	✓ (10 mins)	✓ (10 mins)	✓ (10 mins)
Increased public parking costs (+50%)	✗	✗	✓	✓	✓ (long stay)	✓ (long stay)
Modal shift to walk/cycle	✗	✗	✓ (target)	✗	✓ (<5km)	✓ (<5km)
Increased car occupancy levels	✗	✗	✓	✗	✗	✗
Additional P&R site at Linton	✗	✗	✓	✗	✗	✗
Sittingbourne Rd P&R site	✓	✓	✓	✓	✗	✗

DS4 - Travel Demand (AM Peak)



	2014	2031 DM	2031 DS1	2031 DS2	2031 DS3	2031 DS4a	2031 DS4b
		17,381	17,381	17,381	16,247	18,560	18,560
Person Trips	50,300	58,600	58,600	58,600	57,800	59,200	59,200
% difference vs 2014		+17%	+17%	+16%	+15%	+18%	+18%
Vehicle Trips	35,500	41,500	41,600	37,700	38,600	39,300	39,300
% difference vs 2014		+17%	+17%	+6%	+9%	+11%	+11%

AM peak busiest - highest number of people and vehicle movements

2031 DS4 - Increase in person trips resulting from higher housing vs all scenarios.

Similar level of vehicle demand for both DS4a and DS4b.

Reduction in vehicle trips vs DM due to transport interventions (bus frequency, parking costs, walk/cycle mode shift).

DS4 - Overall Network Performance (AM Peak)



	2014	2031 DM	2031 DS1	2031 DS2	2031 DS3	2031 DS4a	2031 DS4b
		17,381	17,381	17,381	16,247	18,560	18,560
Travel Distance (veh km)	122,000	144,500	146,700	126,900	135,500	140,100	141,600
% difference vs 2014		+18%	+20%	+4%	+11%	+15%	+16%
Travel Time (veh hours)	8,300	11,400	10,800	8,500	8,800	9,300	9,900
% difference vs 2014		+38%	+30%	+3%	+7%	+13%	+20%

2031 DS4a – Increase in travel distance on network approaching DM levels suggesting ‘rat running’ to avoid congestion. Overall travel times on the network would increase by 13% vs 2014 conditions.

2031 DS4b – Without Leeds/Langley Link both travel distance and travel time increase vs DS4a. Travel time increases significantly (+7%) indicating Leeds/Langley Link would reduce delay on key congested links (A274, A229, Willington St).

DS4 - A229 & A274 Impacts



- Recognised as key congestion 'hot spots' on the network
- Traffic flows on A229 & A274 will increase significantly without transport intervention(s)
- DS4a and DS4b would result in a significant increase in two-way traffic flows (15-22%)
- Implementation of Leeds / Langley Link Rd reduces impact on these routes

A229/A274 (North of Wheatsheaf jct)

AM Peak	2014	2031 DM	2031 DS1	2031 DS2	2031 DS3	2031 DS4a	2031 DS4b
2-way Traffic Flow	2,600	3,390	3,160	2,970	2,900	3,000	3,180
% difference vs 2014		+30%	+21%	+14%	+11%	15%	22%

Impact of Leeds / Langley Link Rd (DS4a vs DS4b)

	Reduction in 2-way Traffic Flow		
	A274 Sutton Rd	Willington St (S)	A229 (North of Wheatsheaf)
AM Peak	16%	15%	6%

DS4 - Transport Strategy Impacts (AM Peak)



Approximation of the impact of individual transport measures vs DM*

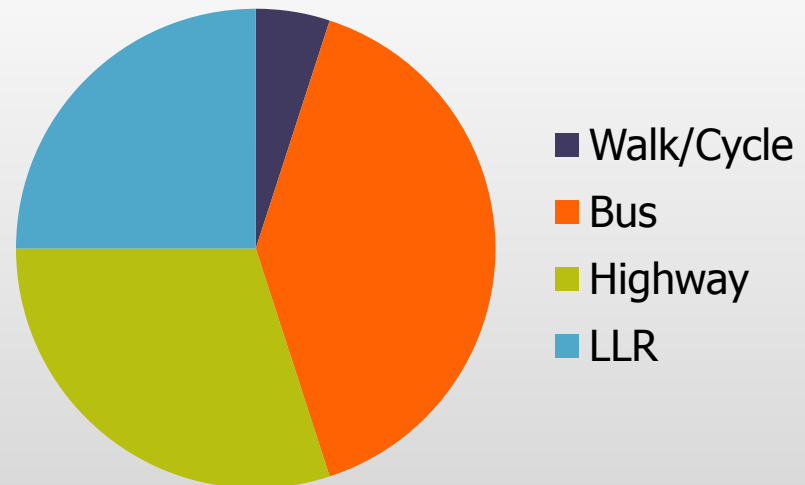
Small % of travel time savings due to modal shift to walk/cycle

Approx. 40% of travel time savings due to increased bus frequencies & parking costs

Approx. 30% of time saving due to highway improvements

Approx. 25% of time saving due to Leeds/Langley Link Road

Transport Measure	Estimated Impact on Travel Time*
Increased Walking/Cycling	5%
Increased Parking Costs	40%
Increased Bus Frequencies	
Highway Improvements	30%
Leeds/Langley Link Road	25%



*estimated impact only – some measures are interrelated



Thank you

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