

1



London 2030 TMP

smart moves
LONDON 2030
TRANSPORTATION MASTER PLAN


London CANADA

Assessment of Additional Growth Scenarios

Strategic Priorities and Policy Committee
December 20, 2011

The slide features a background image of a suburban neighborhood with a house, a car, and people walking. The text is overlaid on this image.

2



Presentation Purpose

1. To respond to Council's March 2011 request that:

Growth (1 to 2%) and intensification (20 to 40%) alternative rates be evaluated (including operating and capital costs) prior to the next Public Meeting

2. To seek Council's approval:

A modified approach for completing the TMP

The slide features a background image of a modern city skyline with a large green structure in the foreground. The text is overlaid on this image.

Recap of Study Status

- 3rd Public Workshop was held on January 19, 2011 to present results of testing of 3 growth scenarios
- Interim Report #2 completed in March 2011 documenting Phase 2 of this 3-phased TMP
- March 2011 Progress Report to Council recommending:
 - ▶ BRT concept be incorporated into TMP update
 - ▶ Its implementation be staged
 - ▶ 2 initial routes proposed for 2030 be further evaluated in Phase 3
- Newsletter #4 distributed in June 2011



3

Scenario 1

Sustain Existing Service Levels

- 1% annual growth
- 22% intensification
- 10% transit share

Scenario 2

More Balanced Approach

- 1% annual growth
- 40% intensification
- 15% transit share

Scenario 3

Transit Focus



- 2% Annual growth
- 40% intensification
- 20% transit share

Preferred RT Corridors and Network



4

Initial Conclusions on Growth



5

<ul style="list-style-type: none"> • If growth continues at 1% and is not redirected, then ➔ 	<p>Scenario 1</p> <ul style="list-style-type: none"> • Sustain Existing Levels of Service (10% transit)
<ul style="list-style-type: none"> • With 15% transit, if growth continues at 1% and 40% can be directed to Central London and nodes, then ➔ 	<p>Scenario 2</p> <ul style="list-style-type: none"> • 2 RT lines supported
<ul style="list-style-type: none"> • With 20% transit, if 2% growth and 40% can be directed to Central London and nodes, then ➔ 	<p>(What if?) Scenario 3</p> <ul style="list-style-type: none"> • 2 RT lines well supported (20% transit)
<ul style="list-style-type: none"> • Achieving growth higher than 1% or intensification greater than 40%, combined with policies to increase transit use beyond 15%, would better support 2 BRT lines and possibly LRT beyond 2030 	


Dundas West Corridor, Quebec and Dundas N/W corner - Existing

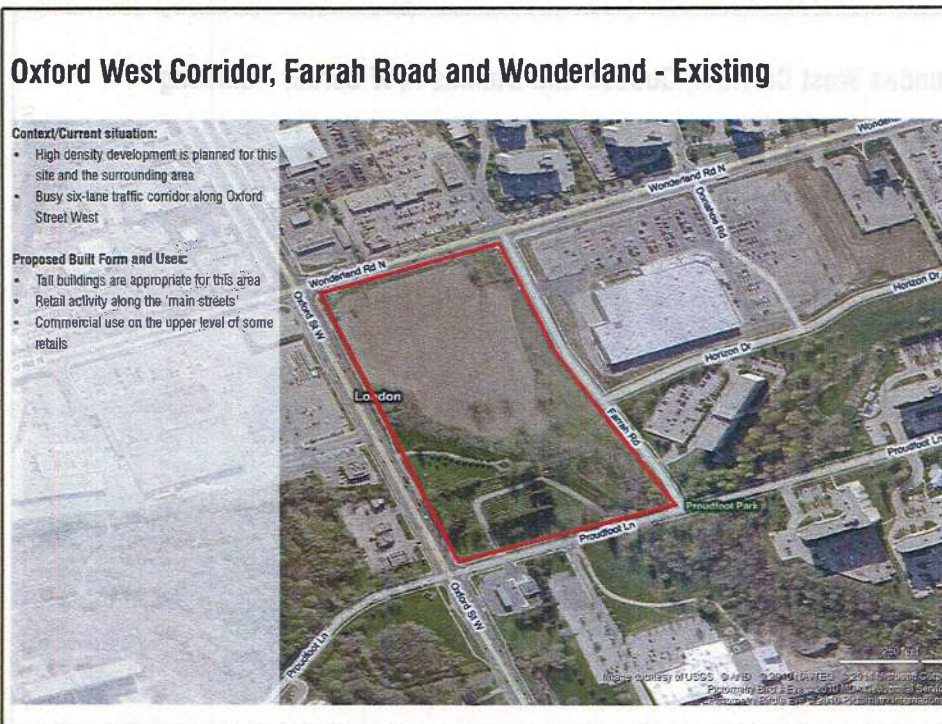
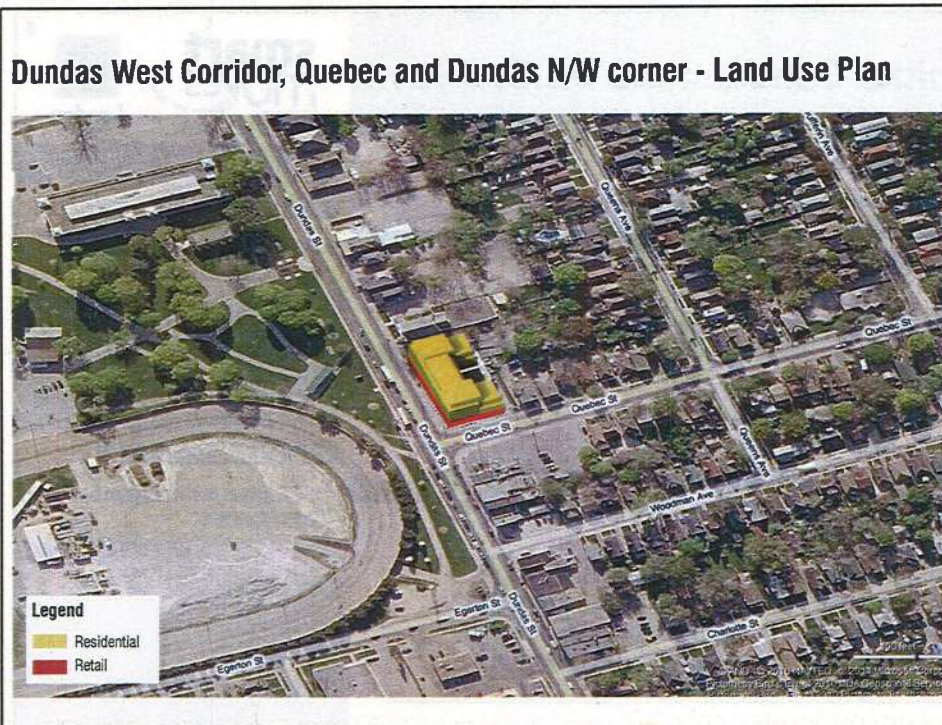
Context/Current situation:

- Residential area to the north is a designated heritage district
- Turn-of-the-century building types
- Independent retailers with small floor plates (for example, pizzeria and vacuum store)

Proposed Built Form and Uses:

- 4-6 storeys of residential with 1 storey of retail space
- Stepping down on the north side toward the residential area





Oxford West Corridor, Farrah Road and Wonderland - Land Use Plan



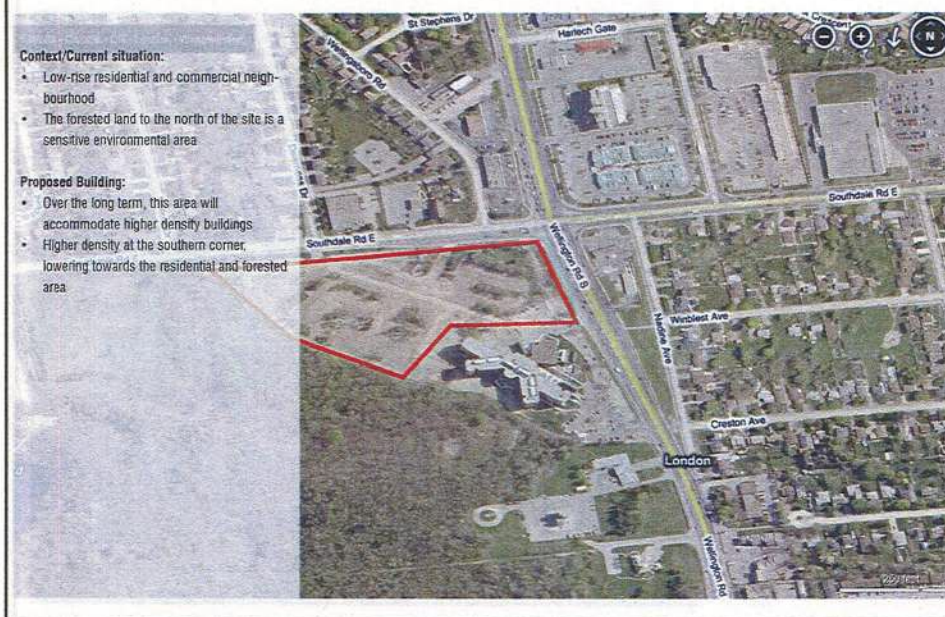
Richmond Corridor, at Broughdale Street - Existing



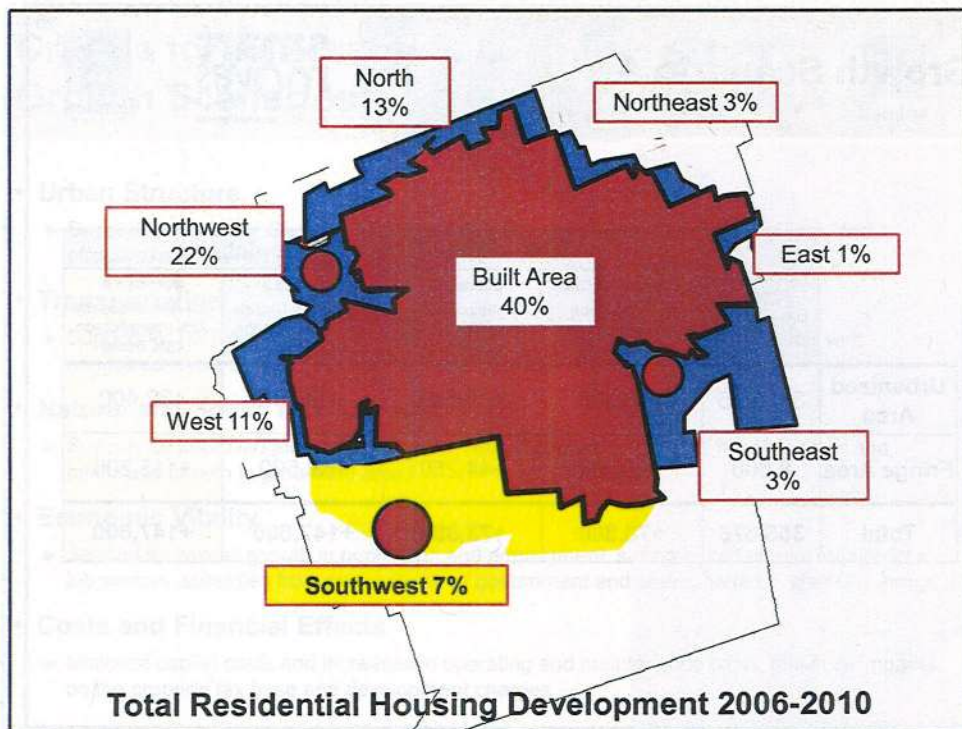
Richmond Corridor, at Broughdale Street - Land Use Plan





Wellington Corridor, at Southdale Road - Existing



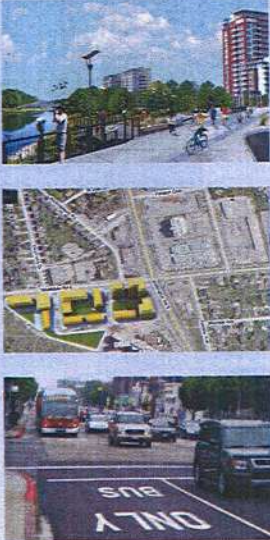
Wellington Corridor, at Southdale Road-Option1 - land Use Plan





Urban Structure Factors



19

- Strong and Vibrant Central London
- Mixed-Use Nodes and Corridors
- Effective Use of Municipal Infrastructure



Support for Central London Revitalization





20

Assumed Growth in the Central London

Growth	Scenario 1 <small>1% Annual Growth 22% Intensification</small>	Scenario 2 <small>1% Annual Growth 40% Intensification</small>	Scenario 3 <small>2% Annual Growth 40% Intensification</small>	Scenario A <small>2% Annual Growth 22% Intensification</small>	Scenario B <small>1.5% Annual Growth 30% Intensification</small>
Population	2,300	11,075*	22,150*	4,600	6,330
Employment	950	950**	6,800	10,750	5,850
Total	3,250	12,025	28,950	15,350	12,180

Note: * Scenarios 2 and 3 assume 37.5% of urban area population growth occurs within Central London.
 ** Scenario 2 has not yet reallocated GMIS employment growth to better support intensification



Support for Nodes & Corridors



21

Assumed Growth to 2030 in Nodes & Corridors					
Growth	Scenario 1 <small>1% Annual Growth 22% Intensification</small>	Scenario 2 <small>1% Annual Growth 40% Intensification</small>	Scenario 3 <small>2% Annual Growth 40% Intensification</small>	Scenario A <small>2% Annual Growth 22% Intensification</small>	Scenario B <small>1.5% Annual Growth 30% Intensification 15% Transit</small>
Population	1,300	11,075*	22,150*	2,600	7,470
Employment	4,850	4,850**	15,925	16,050	10,450
Total	6,150	15,925	38,075	18,650	17,920

Note: * Scenarios 2 and 3 assume 37.5% of urban area population growth occurs within key nodes and corridors.
 ** Scenario 2 has not yet reallocated GMI/S employment to better support intensification

Efficient Use of Infrastructure





22

Percentage and Amount of Population Growth to 2030 in Urbanized Areas					
	Scenario 1 <small>1% Annual Growth 22% Intensification</small>	Scenario 2 <small>1% Annual Growth 40% Intensification</small>	Scenario 3 <small>2% Annual Growth 40% Intensification</small>	Scenario A <small>2% Annual Growth 22% Intensification</small>	Scenario B <small>1.5% Annual Growth 30% Intensification</small>
% of Growth in Urbanized Areas	22	40	40	22	30
Amount of Growth in Urbanized Areas	16,200	29,550	59,100	32,400	33,200




Infrastructure Types

- **Transportation**
 - ▶ Roads
 - ▶ Transit
 - ▶ Walk/Cycle
- **Other Hard Services**
 - ▶ Storm Sewers
 - ▶ Sanitary Sewers/ Treatment Plants
 - ▶ Water/Treatment Plants
- **Other Soft Services**
 - ▶ Protective (Fire, Police, EMS)
 - ▶ Libraries
 - ▶ Parks and Recreation



Transportation Assessment Factors



23

- Support for BRT Investment
- Overall Transit Network Levels of Service
- Amount of Road Network Congestion

Support for BRT



24

2030 AM Peak Hour BRT Line Ridership					
Line/ Direction	Scenario 1* 1% / 22% 10% Transit	Scenario 2 1% / 40% 15% Transit	Scenario 3 2% / 40% 20% Transit	Scenario A 2% / 22% 15% Transit	Scenario B 1.5% / 30% 15% Transit
East-West/EB	1,200 – 1,400	2,500 – 2,700	3,400 – 3,600	2,600 – 2,800	2,500 – 2,800
East-West/WB	200 – 400	600 – 700	1,100 – 1,300	700 – 800	700 – 800
North-South/NB	600 – 800	1,200 – 1,350	2,000 – 2,200	1,400 – 1,600	1,400 – 1,500
North-South/SB	200 – 400	600 – 750	1,100 – 1,300	800 – 900	700 – 800
Totals	2,200 – 3,000	4,900 – 5,500	7,600 – 8,400	5,500 – 6,100	5,300 – 5,900

Note: * Scenario 1 includes express bus service only in the BRT corridors

Overall Transit Network Level of Service

smart moves
LONDON 2030
TRANSPORTATION MASTER PLAN

London
CANADA

25

2030 Frequency Range of Peak Hour Service

	Scenario 1 10% Transit	Scenario 2 15% Transit	Scenario 3 20% Transit	Scenario A 15% Transit	Scenario B 15% Transit
Frequency Best Routes	10 min.	7.5 min.	5 min.	7.5 min.	7.5 min.
Frequency Worst Routes	30 min.	25 min.	20 min.	30 min.	25 min.

Congestion on the Road Network

smart moves
LONDON 2030
TRANSPORTATION MASTER PLAN

London
CANADA

26

% of Major Roads Congested needing Capital Investment 2030 AM Peak Hour

	Scenario 1 10% Transit	Scenario 2 15% Transit	Scenario 3 20% Transit	Scenario A 15% Transit	Scenario B 15% Transit
Auto Vehicle Trips	55,900	54,145	53,450	60,945	58,010
Vehicle-km of Travel	594,800	575,450	624,800	676,580	632,210
Lane-km Congested	298	272	325	354	321
% Network Congested	15.4%	14.1%	16.9%	18.4%	16.6%

Environmental Factors

- Air Quality
- Healthy Lifestyles
- Consumption of Greenfields
- Diversity of Housing

smart
moves
LONDON 2020
TRANSPORTATION MASTER PLAN

London
CANADA

27

Assessment of Environmental Factors

Factor	Scenario 1	Scenario 2	Scenario 3	Scenario A	Scenario B
Air Quality <small>(Vehicle km of Travel)</small>	594,800	575,450	624,800	676,580	632,210
Healthy Lifestyles <small>(Amount of Res. Intensification)</small>	16,200	29,550	59,100	32,400	33,200
Consumption of Greenfields <small>(Amount of Fringe Res. Growth)</small>	57,600	44,250	88,500	115,200	77,500
Diversity of Housing Types <small>(Amount of Res. Intensification)</small>	16,200	29,550	59,100	32,400	33,200

smart
moves
LONDON 2020
TRANSPORTATION MASTER PLAN

London
CANADA

28

29






Economic Vitality Factors

- Total Growth in Population and Employment
- Strengthening of Key Job Sectors
- Ability to Leverage Subsidies from Senior Levels of Government
- Overall City Image







30




Assessment of Economic Vitality

Factor	Scenario 1	Scenario 2	Scenario 3	Scenario A	Scenario B
Total Amount of Growth <small>(Population and Employment)</small>	100,800	100,800	209,700	203,600	152,700
Strengthening Key Job Sectors <small>(Medical, Education and Manufacturing)</small>	3,875	More than Scenario 1	More than Scenario A	17,875	10,875
Ability to Leverage Subsidies <small>(for BRT & Downtown Terminal)</small>	- / 22%	\$252 M / 40%	\$252 M / 40%	\$252 M / 22%	\$252 M / 30%
Overall City Image <small>(Central London, Other Nodes, Options for Work, Live and Play)</small>	Poor	Good	Very Good	Poor-Fair	Fair



Financial Factors



31

- Transportation Capital Costs
- Roads and Transit O&M Costs
- Growth Related Costs/New Resident
- Transportation Impact on Property Tax Base

Transportation Capital Costs



32

	20 Year Capital Costs (\$/Millions)				
Transportation Element	Scenario 1	Scenario 2	Scenario 3	Scenario A	Scenario B
Municipal Roads	1,490	1,360	1,625	1,770	1,605
Municipal Transit*	49	136*	220*	238*	143*
Active Transportation and Parking	16	44	56	36	36
Total Transportation Capital	1,555	1,540	1,901	2,044	1,784

Note: * Net of assumed subsidies from senior levels of government.



Future Roads Capital Costs

	Scenario 1 Residential Growth 73,800	Scenario 2 Residential Growth 73,800	Scenario 3 Residential Growth 147,600	Scenario A Residential Growth 147,600	Scenario B Residential Growth 110,700
Base Road Capital Needs (\$/Millions)	755	755	755	755	755
Growth Related Road Capital Needs (\$/Millions)	735	605	870	1,015	850
Growth Related Road Costs Per New Resident	\$9,959	\$8,198	\$5,894	\$6,877	\$7,678



Note: • This is not DC rate calculation



Annual Operating and Maintenance Costs

	2030 Annual Municipal Roads & Transit O&M Costs				
	Scenario 1 Transit R/C = 47%	Scenario 2 Transit R/C = 52%	Scenario 3 Transit R/C = 61%	Scenario A Transit R/C = 56%	Scenario B Transit R/C = 54%
Roads (\$/Millions)	36.3	35.7	36.6	37.2	36.6
Transit – Gross (\$/Millions)	24.4	29.7	37.1	36.0	30.7
Transit – Net (\$/Millions)	12.9	14.3	14.5	15.8	14.1
Total – Net (\$/Millions)	49.2	50.0	51.1	53.0	50.7



Relative Impacts on Property Tax Base



35


	2030 Net Municipal Transportation Cost Impacts				
	Scenario 1	Scenario 2	Scenario 3	Scenario A	Scenario B
20 Year Capital Costs Funded by Tax Base	\$504.7 M	\$552.3 M	\$714.9 M	\$780.4 M	\$633.5 M
Avg. Annual Capital Cost/Capita	\$58.75	\$64.30	\$71.02	\$77.53	\$67.92
2030 Annual Net O&M Cost/Capita	\$114.55	\$116.40	\$101.53	\$105.31	\$108.71
2030 Total Annual Costs/Capita	\$173.30	\$180.71	\$172.55	\$182.84	\$176.63

*Note: * Preliminary numbers; will be refined in final phase of TMP.*

Summary Assessment of Five Scenarios





36

	Growth Scenarios					
	Scenario 1	Scenario 2	Scenario 3	Scenario A	Scenario B	
Urban Structure						
Transportation						
Natural & Social Environment						
Economic Vitality						
Costs & Financial Impacts	<i>Growth Cost/ New Resident</i>	\$9,959	\$8,198	\$5,894	\$6,877	\$7,678
	<i>Impact on Property Tax Base</i>	\$173.30	\$180.71	\$172.55	\$182.84	\$176.63





Worst ← → Best

Key Messages



37

- Scenario 1 (1% growth with 22% intensification) without BRT is not sustainable. Expect higher City subsidy for transit and higher cost/new resident for transportation system; does not support Central London growth well.
- Intensification (even with low growth rates) reduces growth costs (all hard infrastructure) and, if directed to Central London, and to Nodes and Corridors, supports higher transit ridership making BRT viable, in turn supporting more growth in Central London.
- Higher growth rates support higher order transit, significantly reduce costs/new resident and allow City urban structure to change faster, including Central London.

Key Messages *(continued)*



38

- While Scenario 3 rates best overall, achievement of 2% annual growth by 2030 would be a “stretch” goal.
- Without solid substantiation for 2% annual growth, there is relatively high risk that senior levels of government would not contribute to BRT investments, if TMP based solely on Scenario 3
- Still, Scenario 3 is a good long-term (25 to 40 years) target for development within the urbanized area

81-57-1105

39

Proposed Direction for Completing TMP

smart moves
LONDON 2030
TRANSPORTATION MASTER PLAN

London
CANADA

- **Overall Growth Rate :**
 - ▶ 1.5 % growth rate also a “stretch”; use base population/employment growth of 1%, with triggers, providing for a ramp-up to 2%.
 - ▶ De-emphasize horizon years (assumed 1% growth over 20 years could occur sooner (i.e.by 2025, or even 2020); put a TMP in place to serve a level of growth, whenever it might happen.
- **Intensification Rate :**
 - ▶ OP Review should consider 40% as a minimum – if only 1% growth achieved, it would still support BRT.
 - ▶ Also, given the Provincial Growth Plan precedent, 40% likely to be minimum that senior levels of government would support for BRT subsidies.
 - ▶ If 40% target achieved, a 1.5% growth rate would still allow for fringe area growth greater than current GMIS (in fact, could go to 48% intensification without impacting GMIS fringe).

40

Proposed Direction for Completing TMP *(continued)*

smart moves
LONDON 2030
TRANSPORTATION MASTER PLAN

London
CANADA

- **Allocation to Central London, Nodes & Corridors**
 - ▶ Target allocations should be established to ensure support for BRT.
 - ▶ Target densities should also be set for these areas.
- **City Growth should be Monitored Closely**
 - ▶ Intensification is essential to support BRT.
 - ▶ To build that support quickly, directing growth to Central London, and to other key nodes and corridors at appropriate densities needs to start now, and stay on target.