

# Employment, Population, Housing and Non-Residential Construction Projections, City of London, Ontario, 2011 Update

Independent Real Estate Intelligence

**DRAFT REPORT**

June 7, 2012



# **Employment, Population, Housing and Non-Residential Construction Projections, City of London, Ontario, 2011 Update**

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June 7, 2012

# DRAFT

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## EXECUTIVE SUMMARY

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In 2006 Altus Group Economic Consulting (formerly Clayton Research) was retained by the City of London to provide a 30-year projection of employment, population, housing and non-residential construction for the City of London. The result of this work was the report *Employment, Population, Housing and Non-Residential Construction Projections, City of London, Ontario*. This report updates the 2006 report, reflecting changes in underlying macroeconomic and employment conditions, federal policies affecting immigration, full 2006 census data and preliminary 2011 census data, and the land-planning policy environment in Ontario.

### Economic Background

The projections of employment for the City of London take into consideration the macroeconomic environment in Canada and Ontario and specific local economic conditions.

The credit shock that hit the world financial system in October 2008 has altered short-term expectations from investors and economists on the world economic outlook. Over the next few years, the world economy will face uncertainties as the U.S. as well as several European countries resolve their sovereign debt issues and economic growth in emerging economies decelerates. In addition, wide swings in energy prices and Canadian currency value also create uncertainties in the macroeconomic outlook.

There are a number of external factors that are affecting the growth outlook for the Canadian economy, including the evolving situation in Europe, the slow recovery in the U.S., and the threat of increased protectionism in the U.S. and elsewhere. Going forward, once these short-term shocks run their course, labour shortages in Canada will re-emerge as the principal macroeconomic challenge to the economy, as the population ages. Productivity in Canada over the next 30 years is expected to progressively improve, however, there may also be a slower economic growth environment, including lower growth rates of exports and domestic consumption, and a correspondingly lower production of goods and services.

In Ontario, there are balanced economic factors that work both for and against a robust pace of employment growth in the decades ahead, including

a well-diversified industrial base, the recent revitalization of the North American automobile sector, continued strong attraction for international migrants, but international and domestic fiscal factors will also weigh in.

In southwestern Ontario, traditional economic strengths such as manufacturing and agriculture have been hit hard by the recession and other international forces in recent years, but a transforming economic base, and other factors, will assist economic development in the years ahead. Provincial planning policy in the Greater Golden Horseshoe may progressively push more growth out to southwestern Ontario in the years ahead.

The city of London's economy was hit hard by the recent recession, but a number of promising economic development efforts currently underway and an increasing competitive position within the advanced manufacturing and life sciences research sectors provide a solid platform for growth.

London has and will continue to benefit from these positive factors and will likely perform only slightly slower than competing centres within southwestern Ontario. All told, employment in the city of London (on a place of work basis) is expected to expand **70,000** persons over the period 2011-2041. This represents an average annual rate of growth of 1.05% per year.

## Population

The population projections presented in this report consider first the potential population growth for Middlesex County as a whole, and then the proportion of that population which is likely to be captured by the City of London.

The population of Middlesex County is likely to rise a total of about **132,900** persons over the 2011-2041 period. The driving factor behind this growth is anticipated rise in the employed population, based on the employment forecast for the City of London (where a majority of the employed person's in Middlesex County work). The gap between the total rise in population and the rise in employed population is due to declining total participation rates in the labour force, which is due, in turn, to the aging of the population into retirement years.

Sources of population growth in Middlesex County include an improving increase of just over **24,000** persons through natural increase (the net of births and deaths) and a net inflow of about **108,500** migrants. About one third of

the net migration is expected to come from international sources: the remainder from other parts of Canada.

The City of London currently accounts for about 83% of the population across Middlesex County, but is expected to capture a similar share of the population growth over the projection period. All told, the population in the City of London is expected to rise by about **114,700** persons.

## Housing

The Altus Economics potential housing demand model was employed to generate housing demand projections for the City of London based on the projected population.

Potential household growth is a function of the projected population by age along with headship propensities (the number of people in each age group who are projected to head up a household).

Over the period 2011 to 2041, a total of **48,800** new households are expected in the City of London. Accounting for replacement demand, the expectation is for demand for the construction of some **61,050** new dwellings.

<b>Annual Housing Completions, City of London, 2006-2041</b>					
<u>Census Periods</u>		Single and	Row	Apartments	Total
		Semis		and Other	
<i>Occupied Dwelling Units</i>					
2006-2011		1,115	226	793	2,134
2011-2016	<i>f</i>	1,001	340	716	2,057
2016-2021	<i>f</i>	1,170	379	705	2,254
2021-2026	<i>f</i>	1,151	354	644	2,149
2026-2031	<i>f</i>	1,096	318	604	2,018
2031-2036	<i>f</i>	1,049	288	511	1,848
2036-2041	<i>f</i>	1,006	293	596	1,895
<b>2011-2041</b>					
	Avg. Annual	1,080	330	630	2,035
	Total	32,400	9,900	18,900	61,050
<i>Percent Distribution</i>					
<u>Census Periods</u>					
2006-2011		52	11	37	100
2011-2016		49	17	35	100
2016-2021		52	17	31	100
2021-2026		54	16	30	100
2026-2031		54	16	30	100
2031-2036		57	16	28	100
2036-2041		53	15	31	100
<b>2011-2041</b>		52	15	33	100
Totals may not add due to rounding					
Source: (f) forecasts by Altus Economics					

Low density housing is expected to account for the majority – about 52% – of housing completions over the projection period. Medium and high density should account for about 15% and 33% respectively.

## Non-Residential Construction

Just less than **40 million square feet** of non-residential space construction is anticipated in the City of London between 2011 and 2041. At just over 1.3 million square feet per year, therefore, the pace of non-residential construction will be significantly stronger than the average of 0.6 million sq. ft. per year built during the 2001-11 period.

Some **48%** of the anticipated new non-residential construction will be industrial, with the remaining split between commercial (**22%**) and institutional (**31%**).

Commercial construction projected for the City of London will be split between office space (about **1.6 million**) and retail and hospitality facilities (about **7.0 million** square feet).

Institutional construction projected for the City of London will be split between long-term care facilities (about **1.2 million** sq. ft.) and other types of institutional uses (the remaining **11.0 million** sq. ft.).

### Non-Residential Space Demand, City of London, 2001-2041

Total	Industrial	Commercial		Institutional	Total
		Office	Retail/Other		
<i>Square Feet (000s)</i>					
2001-2006 <i>a</i>	1,749	461	1,675	3,637	7,521
2006-2011 <i>a</i>	(848)	178	(1,426)	369	(1,728)
2011-2016 <i>f</i>	3,020	391	1,302	2,875	7,588
2016-2021 <i>f</i>	2,800	194	841	1,364	5,199
2021-2026 <i>f</i>	2,494	81	740	833	4,147
2026-2031 <i>f</i>	2,973	208	1,146	1,311	5,637
2031-2036 <i>f</i>	3,648	352	1,290	3,145	8,435
2036-2041 <i>f</i>	4,025	387	1,632	2,648	8,692

Source: Altus Group Economic Consulting

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# 1 INTRODUCTION

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In 2006 Altus Group Economic Consulting (formerly Clayton Research) was retained by the City of London to provide an update of the previous 30-year projection of employment, population, housing and non-residential construction for the City of London. It has been over 5 years since the update study. During the period, the Canadian economy went through a severe recession, as did the rest of the world. City of London also was hit hard by the downturn. This report provides an update of the previous study and extends the forecast to 2041, incorporating changes in underlying macroeconomic trends and government policies.

## 1.1 WORK PLAN

Altus Group undertook this assignment in conjunction with planning staff at the City of London. As part of this work, Altus Group has analyzed the 2006 report and undertaken the following:

- Revised the underlying macroeconomic outlook;
- Revised employment forecast;
- Revised population forecast;
- Revised household formation forecast based on new population estimates; and
- Revised non-residential space requirements based on new employment forecast.

## 1.2 REPORT STRUCTURE

In addition to this introduction chapter, there are 6 chapters in this report:

- Chapter 2 provides an overview of the methodologies employed in this report
- Chapter 3 presents the analysis of economic and employment prospects for the City of London;
- Chapter 4 presents projections of population growth for the City of London over the 2011-2041 period;
- Chapter 5 provides forecasts for household growth in the city over the forecast period;

- Chapter 6 presents projections for non-residential building space requirements in the city based on the employment forecasts; and
- Chapter 7 provides two alternative growth scenarios, high and low, for employment population, households and non-residential space requirement.

### 1.3 CAVEAT

This report has been prepared on the basis of the information and assumptions set forth in the text. This report relies on information from a variety of secondary sources. While every effort is made to ensure the accuracy of the data, we cannot guarantee the complete accuracy of the information used.

In addition, the projections have been prepared using the best information available at the time. In many cases, data on which these projections rely may be subject to revisions, which could have implications on the results presented. In all cases, long-term projections should be reviewed periodically in order to assess the continued applicability of the underlying assumptions.

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## 2 METHODOLOGY

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This chapter presents the overall modelling methodology employed by Altus Group in the City of London projections.

### 2.1 A NOTE ON GEOGRAPHIC AREAS REFERRED TO IN THIS REPORT

The focus of the demographic and real estate projections presented in this report is the geography encompassed by the City of London. Population in the City of London was 366,155 persons reported in the 2011 Census.

Other major geographic areas in this report include Middlesex County, of which the City of London represents about 83% on a 2011 Census population basis; and the London Census Metropolitan Area (CMA) of which the City of London represents 77% on the same basis.

Due to the limitations of data which sometimes are available only at the county or CMA level, this report will often make reference to all three of these major geographies. Figure 1 illustrates these three major geographies in terms of their constituent municipalities.

### 2.2 THE MODEL STRUCTURE

There are four basic models employed in this report, and each is inter-related:

- **The Economic Model:** This model considers macroeconomic projections for Canada and Ontario, along with a long-term economic development scenario for the City of London in order to yield 30-year projections of employment (place of work basis) in the City of London.
- **The Population Model:** This model is first calibrated to Middlesex County, as a standard cohort survival model, in conjunction with population projection methodology guidelines set out by the Ontario Ministry of Municipal Affairs and other Ministries. The population model is linked to the economic model via the migration assumptions (net migration is assumed to respond to labour market conditions, for example, a shortage of labour will draw in more migrants and, a surplus of labour will drive them out). City of London's population by age and sex is derived using a share allocation model.

- **The Housing Model:** The Altus Group housing demand model is employed to project total anticipated household growth for the City of London relying on headship rate assumptions. Adjustments are made to translate household growth into new housing needs.
- **The Non-Residential Building Space Model:** Net new non-residential space construction within the City of London are assessed largely based on the employment growth projections presented in the economic model.

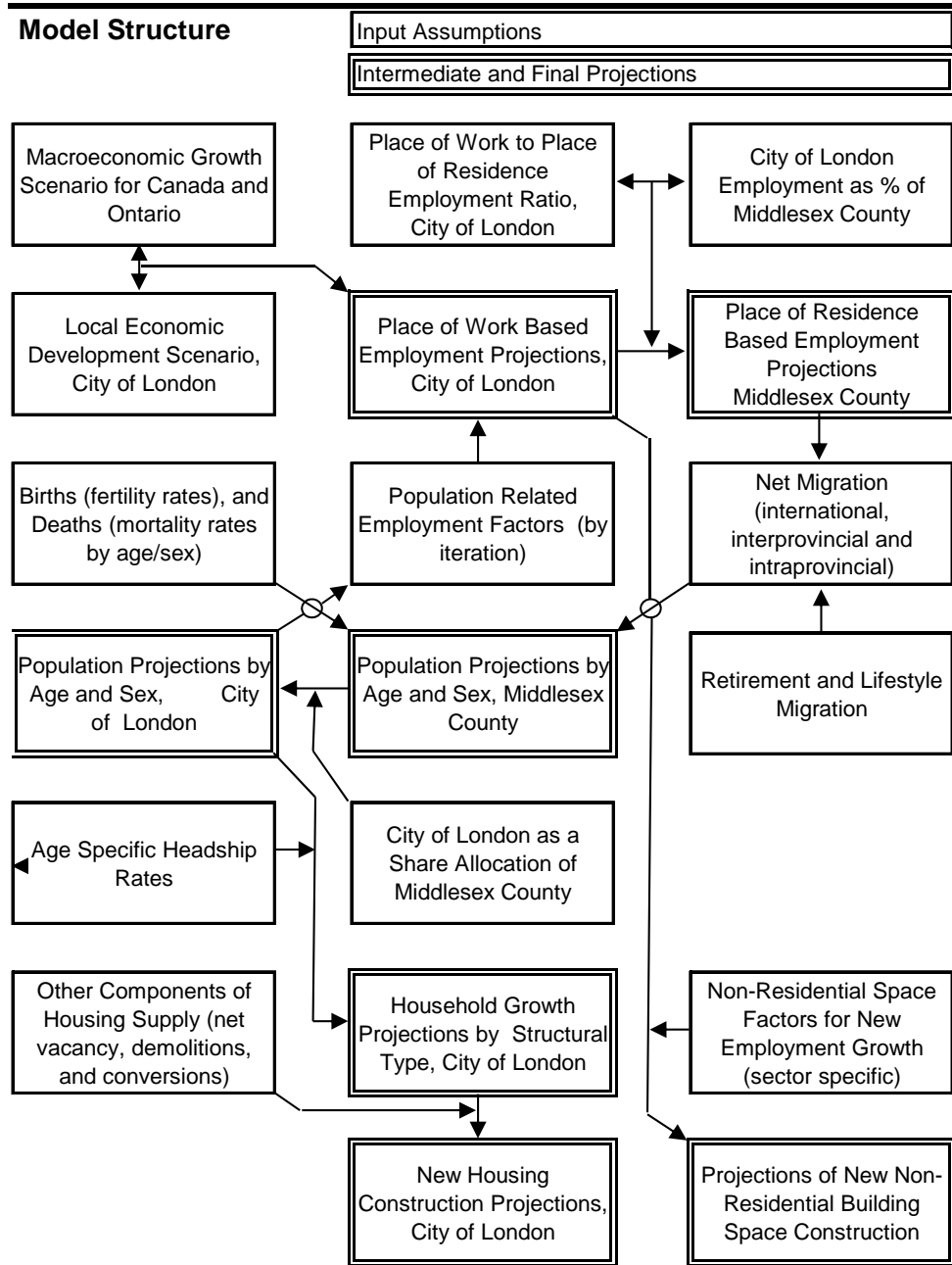
A schematic illustration of the inter-linkages between these four models, detailing all the major input assumptions, intermediate and final projections is presented in Figure 2

Figure 1

	2011 Census Population		2006-2011 Population Growth	
	Persons	% Distribution	Persons	% Distribution
<b>City of London</b>	366,155		13,760	
<b>Middlesex County</b>	439,155	100	15,540 <sup>1</sup>	100
London	366,155	83	13,760	89
Strathroy-Caradoc	20,978	5	1,001	6
Middlesex Centre	16,487	4	898	6
Thames Centre	13,000	3	(85)	(1)
North Middlesex	6,658	2	(82)	(1)
Southwest Middlesex	5,860	1	(30)	(0)
Lucan Biddulph	4,338	1	151	1
Adelaide Metcalfe	3,028	1	(89)	(1)
Newbury	447	0	8	0
Chippewas of the Thames First Nation 42	762	0	15	0
Munsee-Delaware Nation 1	160	0	(7)	(0)
Oneida 41	1,282	0	n.e.r.	
<b>London Census Metropolitan Area (CMA)</b>	474,790	100	17,070	100
London	366,155	77	13,760	81
St. Thomas	37,905	8	1,795	11
Strathroy-Caradoc	20,978	4	1,001	6
Middlesex Centre	16,487	3	898	5
Thames Centre	13,000	3	(85)	(0)
Central Elgin	12,743	3	20	0
Southwold	4,494	1	(230)	(1)
Adelaide Metcalfe	3,028	1	(89)	(1)

<sup>1</sup> Excludes the difference in Oneida 41.  
n.e.r. = Non enumerated Indian reserve  
Source: Altus Group Economic Consulting based on data from Census of Canada

Figure 2



Source: Altus Group Economic Consulting

DRAFT DOCUMENT - FOR DISCUSSION PURPOSES

### 3 ECONOMIC MODEL

This section presents detailed projections of employment growth in the City of London through to 2041.

The following components have been considered for producing the projections of employment growth:

- Macroeconomic conditions in Canada and Ontario are likely to greatly influence the rate of employment growth in the city over the forecast period;
- Review of historical trends in the city of London's economy - in particular employment by industry - and a comparison to the province;
- Examination of major changes in local industry segments and trends in underlying economic development; and
- Review of major economic development initiatives in the city that are currently underway and those are proposed.

#### 3.1 MACROECONOMIC ENVIRONMENT

##### 3.1.1 An Age of Economic Uncertainty

The credit shock that hit the world financial system in October 2008 has altered short-term expectations from investors and economists on the world economic outlook. After extraordinary actions taken by governments and central banks around the world, the world financial system stabilized and started growing again. However, the recent sovereign debt crisis in Europe and the sluggish economic growth in the U.S. pose a threat to the fragile recovery of the Canadian economy.

For the Canadian economy, the recent shift of economic growth from developed countries to emerging economies can bring both benefits and challenges:

- There may be weaker growth in the sectors that are directly connected to American consumer spending, such as newsprint and lumber; but

- There may be faster growth in the sectors linked to consumption from emerging countries, such as technology, oil and gas, and raw materials.

However, over the next few years, the world economy will face uncertainties as the U.S. as well as several European countries resolve their sovereign debt issues and economic growth in emerging economies decelerates. In addition, wide swings in energy prices and Canadian currency value also create uncertainties in the macroeconomic outlook. With respect to the economic growth scenarios in this report, growing economic uncertainty over the short- and medium-terms potentially widens the gap between high and low growth scenarios.

### 3.1.2 Canada

There are a number of external factors that are affecting the growth outlook for the Canadian economy:

- The most prominent concern is related to the European sovereign debt crisis and what impact this will have on economic growth in Canada. Although the European Union (EU) accounts for less than 10% of Canadian exports, a prolonged recession in the EU would weigh on global economic growth and filter down to the Canadian economy;
- There is also the uncertain impact that austerity measures in the U.S., related to the increase in the debt ceiling, will have on economic growth. These include spending reductions totalling some \$2.4 trillion over the next 10 years. These austerity measures come at a time when the unemployment rate remains persistently high and consumer spending has stalled; and
- More pessimistic economic conditions in the U.S. will continue to weigh on Canada's export sector, especially as increased protectionism creeps into U.S. policy.

Although there are short-term challenges to the Canadian economy, over a long period the economy will recover and ultimately return to its long-term growth path. In the past 25 years (between 1985 and 2010), employment growth in Canada averaged 1.5% per year, while the overall economy has expanded by 2.5%. The difference between economic growth and

employment growth is due to the increase in productivity, which in Canada, contributed about 1.0% per annum to economic growth.

Moving forward, the role played by productivity in contributing to economic growth will increase its significance, as the Canadian economy struggles with an emerging labour shortage over the next 20 to 30 years.

As the Canadian population ages, there will be fewer people entering the labour force to replace those retiring from it. Progressively lower birth rates in Canada over the past 40 years, alongside impending retirements of most members of the “baby-boom” generation in the next 30 years, are contributing to this trend.

From a macroeconomic perspective, labour shortages (or reduced growth in the labour supply) result in a slowing of economic growth. The degree to which the pace of economic growth will slow, depends on the prospects for further productivity growth in Canada.

Productivity in Canada over the next 30 years is expected to progressively improve, due to continued advancements in automation and information technology, innovations in goods and services producing techniques and developments in other labour-saving technologies.

However, while increasing productivity will aid in coping with some of the challenges of labour shortages, there may also be a slower economic growth environment, including lower growth rates of exports and domestic consumption, and a correspondingly lower production of goods and services. As a result, Canada will still experience a slower employment growth over the next 25 years than previously.

### 3.1.3 Ontario

Ontario, the biggest contributor to the Canadian economy, accounts for some 40% of the country’s output, and conditions in Ontario can have an overwhelming influence on the rest of the country. Traditionally, Ontario’s economic performance has been a driver of economic development nationwide:

- Between 1980 and 2002, Ontario led economic growth in Canada in all but five single years; however,



- Since 2002, factors such as the recent resource boom (drawing economic activity westward) and the troubled U.S. economy has resulted in Ontario lagging behind nationwide GDP growth.

Relative to other provinces, Ontario is particularly reliant on the strength of the U.S. economy. Ontario has accounted for almost 50% of all Canadian exports to the U.S. over the past decade, although this share has been declining in recent years. The sluggish recovery in the U.S. economy and the strength in the Canadian dollar over the last several years have caused headwinds to the province's economic growth.

Over the long-term, Ontario has grown in parallel to the country:

- Between 1985 and 2010, economic and employment growth in Ontario have been on par with the national average;
- Employment growth in the province has been averaged at 1.5% per year; while
- The provincial economy has been growing at an annual average of 2.5% over the period.

Despite recent challenges posed by the weakness in exports to the U.S. and the strong Canadian currency, employment growth in Ontario will continue keep up with the national average. There are balanced economic factors that work both for and against employment growth in the province:

- The strength in Ontario's economy rests on its well-diversified industrial base. Ontario is home to a wide range of industries, including financial, business and professional services; manufacturing, high-tech industries, biotechnology and trade, etc. This well-diversified base should cushion the economy from an economic downturn;
- The recent successful revitalization of the North American auto industry will aid Ontario's employment growth, especially in the hard-hit manufacturing industry as the auto industry plays a major role in the province's economy;
- Ontario is still one of the top picks for newcomers to the country. This will benefit the province's economy in the future when labour force

growth significantly decelerates and the country begins to rely more heavily on immigration for its labour needs; however,

- There are opposite economic forces that will act as obstacles to Ontario's economic growth. Over the coming years, demand from developed countries including the U.S. and E.U. will continue to be soft. This is going to keep pressure on exports and on the overall economy.
- Recently, the provincial government has been under pressure to cut its fiscal deficits and reduce its debt. There is likely to be spending cuts and the growth in the broad public sector will potentially slow down.

Over the last two decades, there has been a gradual shift in the structure of the Ontario economy:

- Over the recent years, the province's economic growth has come increasingly from the domestic sector while exports and imports have declined as shares of the economy. Over the long-term, the share of imports and exports of the province's GDP are expected to continue on a moderate decline<sup>1</sup>;
- Due to globalization and intense exports competition, Ontario's market share of U.S. exports has been declining over the last several years. However, Ontario has gained market share in other international jurisdictions. The Ontario Ministry of Finance expects these trends to continue - Ontario's exports to the U.S. will continue to decline while exports to the rest of world are projected to almost double their share<sup>2</sup>;
- "Corresponding to the changes in the composition of domestic demand and exports, economic production has also evolved with a marked shift from goods-producing to service-producing industries."<sup>3</sup> Services are expected to gain growing share of Ontario's exports over the long-term<sup>4</sup>; and

<sup>1</sup> Ontario Ministry of Finance, *Ontario's Long-Term Report on the Economy*, 2010, Page 31.

<sup>2</sup> Ibid. Page 32.

<sup>3</sup> Ibid. Page 32.

<sup>4</sup> Ibid. Page 32.

- In line with the shift in the underlying economy, Ontario's employment has gradually shifted into the service sector and within the service sector, high-skilled occupations, such as jobs in the "business, building and other support services" and "professional, scientific and technical services", have reported the strongest growth. These trends are expected to continue, leading to an increased demand for skilled workers.<sup>5</sup>

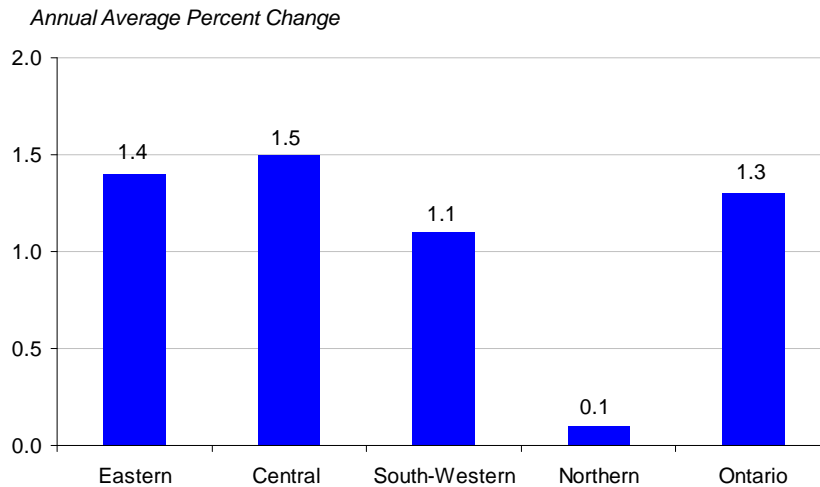
### 3.1.4 Regions within Ontario

Between 2001 and 2011, all regions within the province experienced positive employment growth (Figure 3):

- Employment growth across the province averaged 1.3% each year over the period;

Figure 3

#### Employment<sup>1</sup> Growth by Region, Ontario, 2001-2011



<sup>1</sup> Place of Residence Basis

Source: Altus Group Economic Consulting based on data from Statistics Canada, *Labour Force Survey*

- Central Ontario, in which roughly 57% of the province's total employees are located, also saw an annual employment growth rate of 1.5% during the last decade, the highest among the four regions;

<sup>5</sup> Ibid. Page 34.

- Eastern Ontario, which includes the nation's capital and Kingston, saw its employment growth rate slightly above the provincial average;
- The recent recession and strong Canadian dollar hit Ontario's manufacturing industry much harder, resulting in lower employment growth rates for South-Western and Central Ontario in the last several years. As a result, employment growth in the region averaged at 1.1% each year over the 2001-2011 period, lower than the provincial average and was significantly below the growth rate in Central Ontario;
- Northern Ontario, which represents only 5% of the province's employment, recorded an average annual growth rate of just 0.1%.

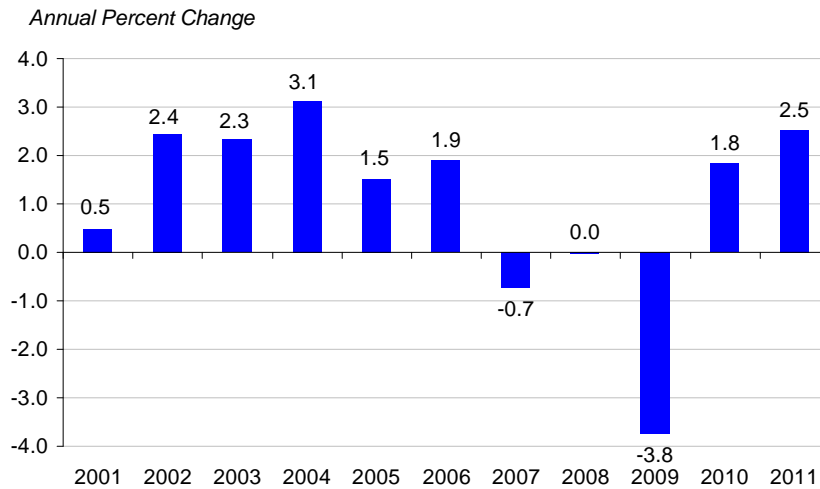
### 3.1.5 South-Western Ontario

Before 2007, when the strong Canadian dollar took a toll on the manufacturing industry, the employment growth in South-Western Ontario was robust (Figure 4). This was primarily due to strong growth in Canada's Technology Triangle and investments in the auto industry in the region.

However, since then, the strong currency and subsequent recession hit hard on the region's employment growth, especially in the manufacturing sector – total employment in the region declined 3.8% in 2009, although there were some healthy rounds over the last two years.

Figure 4

### Employment<sup>1</sup> Growth, South-Western Ontario 2001-2011



<sup>1</sup> Place of Residence Basis

Source: Altus Group Economic Consulting based on data from Statistics Canada, *Labour Force Survey*

Moving forward, provincial policies will play an important role in the economic development in South-Western Ontario:

- The *Greenbelt Act* will continue to push up industrial and commercial land prices within the Greater Golden Horseshoe (GGH);
- The relatively high employment density requirements in the Growth Plan for the *Greater Golden Horseshoe*, could continue to push high-efficiency industries such as automobile and other large-scale manufacturers, further out to areas such as Oxford, Norfolk and Middlesex; and
- In its 2009 Budget, the federal government created the Federal Economic Development Agency for Southern Ontario (FedDev Ontario) and allocated \$1 billion over five years for the new agency. The agency created the Southern Ontario Development Program to “support productivity, innovation, commercialization, community economic development and diversification in Southern Ontario”<sup>6</sup>; and
- Recently the Ontario Government announced that “the government will bring forward legislation to create a new and permanent

<sup>6</sup> Federal Economic Development Agency for Southern Ontario, *Harper Government Launches Southern Ontario Development Program*, News Release, Oct. 02, 2009.

Southwestern Ontario Development Fund. The proposed new fund would build on the strengths of Southwestern Ontario and help address local economic development challenges in a time of global uncertainty”.<sup>7</sup>

Overall, employment growth in South-Western Ontario should continue to lag the provincial average, however, to a lesser extent. Various public policy initiatives will play a role in supporting the region’s economic growth and help the region transform its economy. Over the long-term, the improved demand from the U.S. and the world economy will eventually increase the demand for products from the region

### 3.2 EMPLOYMENT GROWTH IN THE LOCAL ECONOMY

Estimates for employment growth in the City of London are critical to the population and housing growth projections, because:

- Employment levels and growth within the City of London through the forecast period are required in assessing the quantities for non-residential space demand over the period;
- Employment trends within the city help to determine the prospects for growth in jobs for local residents. Job prospects for Middlesex County, in turn, affect population growth in the county due to its influence on migration patterns; and
- This analysis also presents two different scenarios for employment and population growth:
  - The high growth scenario assumes that the city will have an average annual population growth of 1.5% over the forecast period. To generate such population growth, London need to create enough employment to attract migrant workers to the city; and
  - The low growth scenario assumes that the current economic uncertainty will drag on longer than expected, resulting in subpar employment growth over the next decade.

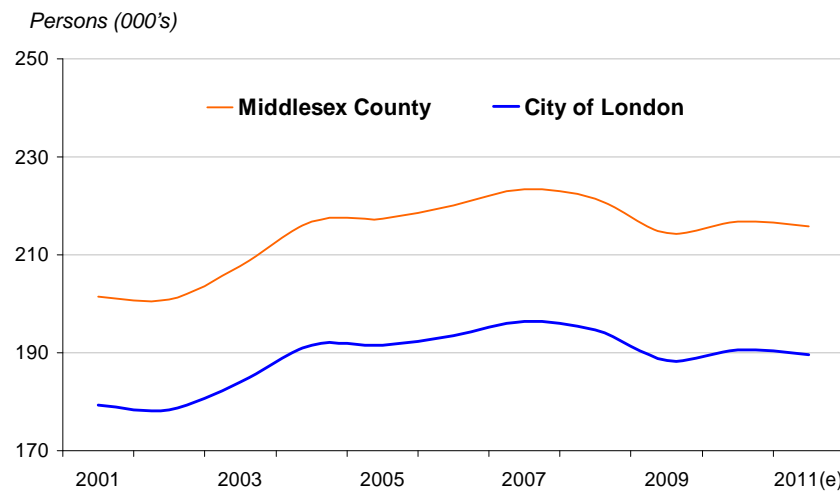
<sup>7</sup> London Economic Development Corporation, *McGuinty Government Announces New Development Fund for Southwestern Ontario*, News Release, Nov. 28, 2011.

### 3.2.1 Employment Trends

Figure 5 illustrates the estimated annual pattern for employment in the City of London and trends in employed labour force for Middlesex County over the last decade.

Figure 5

#### Employment<sup>1</sup>, City of London, Ontario, 2001-2011



<sup>1</sup> Place of Work Basis

Source: Altus Group Economic Consulting based on data from Statistics Canada

The City of London created some 10,325 jobs<sup>8</sup> during the period of 2001-2011, representing an average annual growth rate of 0.6%. Employment in Middlesex County increased at a marginally faster pace of 0.7% on average and generated about 14,240 new jobs.

London's employment was hit hard by the recent recession— during the economic downturn, the city lost approximately 7,300 jobs between 2008-2009. The manufacturing sector was even worse – approximately 8,000 manufacturing jobs were lost during the same period<sup>9</sup>. However, in 2010, the city regained some of the previously lost manufacturing jobs. Over 6,500 new

<sup>8</sup> Place of Work (POW) employment which is measured every five years by the Census of Canada, and includes jobs whose usual location is within the City of London (regardless if those people live in London) and residents in the City of London who either work from home, or have no fixed workplace (such as building contractors, truck drivers, etc.).

<sup>9</sup> City of London, *Our Economy: Progress Report, 2007-2010*, 2010

manufacturing jobs have been created and the unemployment rate has stabilized at 8.8%.<sup>10</sup>

### 3.2.2 City of London's Macroeconomic Prospective

The City of London has plans to introduce a number of economic development initiatives and build business parks in an effort to help transform the local economy in the competitive global environment and attract more business investment to the city<sup>11</sup>:

- **Airport/401/402 Gateway:** Recent regulations have designated the London International Airport as a Duty Free Zone and the Government of Canada also recently signed a new Open Skies agreement with the E.U. Capitalizing on the favourable regulation environment, this economic development plan includes a facilities expansion for cargo. This is a partnership between the London International Airport, City of London and the federal government. An enhancement of the interchange through the 401/402 corridor at Veteran's Memorial Parkway and Wonderland Road is also planned with support from the provincial government. The goal of the plan is to make London a preferred destination for cargo shipments and establish the city as the logistics hub in the region.
- **International Water Excellence Centre<sup>12</sup>:** The City of London, Trojan Technologies, and the University of Western Ontario (UWO) are planning to create a leading centre in North America for industrial water treatment technology, commercialization; and validation and testing. Planned to be located at the Greenway Park, this facility will include research and design labs as well as teaching space. The project will cost over \$21 million in total and initially create 50 to 60 new jobs.
- **Advanced Manufacturing and Research Park:** The City of London is creating a specialized business park that targets advanced manufacturing and green technology companies and research institutes. This park will integrate research and development facilities

<sup>10</sup> Ibid.

<sup>11</sup> This section is mainly based on the City's report, *Our Economy: Progress Report, 2007-2010* and briefing note, *Economic Development and Regional Economic Development, April 3, 2011*.

<sup>12</sup> Formerly is named as Wastewater Validation Technology Centre.



with educational institutions and government agencies, and create a community of advanced industries. The highlight of the centre would be the \$35 million International Composites Research Centre (ICRC), a joint venture of Western and the Fraunhofer Society of Germany. At the core of the ICRC would be a large-scale press for the testing and manufacture of lightweight composite parts for the auto sector and other industries. Initially, the centre is expected to create 20 new jobs, with up to 100 possible jobs when it is fully built. The centre will give the City of London an advantage over others in the lightweight material industry and attract additional business investments to the city.

- **Fanshawe College Downtown Campus:** Fanshawe College is expected to create a new School of Applied and Performing Arts in the city's newly designated education downtown core district as part of a plan to revitalize downtown London. The downtown campus will generate up to 75 new jobs and attract up to 1,500 students to the downtown core.
- **Medical Device Strategy:** This strategy is to leverage on London's existing position as one of the key cities in Ontario for the medical device industry to create an opportunity for continued growth and development in partnership with the LEDC, WORLDDiscoveries, UWO, TechAlliance, other research institutes, and the private sector. It will help the city to attract new business investment in the medical device industry.
- **Innovation Industrial Park, Phases II, III and IV:** Following the recent success of its industrial land strategy, the City will continue to develop future phases of Innovation Park along the Veteran's Memorial Parkway. By having serviced industrial land ready for new development, it will help the city attract new companies and investments.

London primarily competes with two major centres in South-Western Ontario, Kitchener/Waterloo and Windsor/Sarnia, for business investment. During the recent years, Oxford County has emerged as a tough competitor, especially for investment in the manufacturing sector. However, each urban centre generally focuses on different industries and has advantages over others:

- Windsor/Sarnia is the centre of Canada’s automotive manufacturing sector. The region was hit hard by the losses in market share and employment of U.S. based automakers, and the painful restructure of the North American auto sector. Recently however, the auto sector has shown some positive signs. A statement from the WindsorEssex Economic Development Corporation shows that “future investment will continue to be in automotive manufacturing, and in areas that provide a broader diversity in economic growth”.<sup>13</sup> Another strength of the local economy is its agri-business industry;
- With companies like Research in Motion (RIM) and Automation Tooling Systems (ATS) having their headquarters and key operations in Kitchener/Waterloo, the region is the leader in high-tech and advanced manufacturing in Canada, and is known as Canada’s Technology Triangle. The region also plays an important role in Ontario’s automotive sector. It is also a leader in software, communication, information technology, etc. It also has a big business and financial service sector; and
- Over the recent years, Oxford County has been successful in attracting investment in the automotive manufacturing sector. Toyota’s manufacturing plant currently employs about 2,000 workers and produces some 151,000 units of the company’s RAV4 SUV each year. Recently, the company announced that the RAV4 electric vehicle will be built at the plant, starting in 2012. The Toyota plant provides support to a number of auto parts manufacturers. Agriculture is also an important part of the county’s economy. The Oxford County Economic Strategy<sup>14</sup>, suggests that there are increasing opportunities in agri-business and food processing industries.

Overall, London will have some difficulty competing with Kitchener/Waterloo in the high-technology manufacturing sector and Windsor/Sarnia in the automotive sector. Nonetheless, London has its own advantages – the city has been increasingly competitive and remained on the forefront of research within the life sciences. The city also started to invest in logistic (the Airport/Gateway project) and lightweight material industries. The City of London is well poised for future economic growth.

<sup>13</sup> The Website of the WindsorEssex Economic Development Corporation.

<sup>14</sup> Hemson Consulting Ltd, *Oxford County Economic Strategy*, Dec. 15, 2006

### 3.3 EMPLOYMENT PROSPECTIVE BY SECTOR

To project employment growth for the City of London, it is critical to assess growth prospects for major sectors in the local economy. This section provides an overview of employment by sector in 2006 and future prospects for employment within the major sectors in the city.

#### 3.3.1 Employment by Sector, London CMA and Ontario

Figure 6 illustrates the recent trends in employment by sector for London CMA, based on the data from the Labour Force Survey. It shows that:

- In 2011, the top three sectors in the CMA's economy were manufacturing, trade and health care services;
- Over the 2006-2011 period, the CMA lost some 8,600 jobs, mainly due to the poor performance in the primary and manufacturing sectors;
- At the result, the share of the manufacturing employment in the CMA has declined from 12.4% to 16.1% over the period;
- Over the last five years, the major drivers of growth in employment have been the construction, FIRE<sup>15</sup>, health care and other services;
- Compared to the distribution of employment in Ontario by sector, in 2011, London CMA was significantly over-weighted in educational and health care services and under-weighted in professional, and information and cultural services (Figure 7); and
- While the share of Ontario's employment in the information and culture service sector increased over the 2006-2011 period, the sector's share in London CMA's employment actually declined, despite the local government's intention to promote this sector's growth.

<sup>15</sup> It includes finance, insurance, real estate and leasing

Figure 6

**Employment<sup>1</sup> by Industry, London CMA, 1996-2011**

	1996	2001	2006	2011	Change 2006-2011	1996	2001	2006	2011
	# persons employed					% distribution			
Primary	5,100	6,000	6,700	3,600	(3,100)	2.5	2.6	2.7	1.5
Manufacturing	30,800	36,300	40,400	30,200	(10,200)	15.0	15.7	16.1	12.4
Construction	10,300	13,900	12,300	14,700	2,400	5.0	6.0	4.9	6.1
Transportation and warehousing	9,000	9,400	9,600	9,700	100	4.4	4.1	3.8	4.0
Trade	32,800	33,000	37,100	34,700	(2,400)	15.9	14.3	14.8	14.3
FIRE	16,500	15,900	18,200	20,700	2,500	8.0	6.9	7.2	8.5
Prof., scient. and tech. services	10,400	12,500	14,200	14,900	700	5.1	5.4	5.6	6.1
Mgmt of companies/admin. services	6,300	10,100	11,800	11,800	0	3.1	4.4	4.7	4.9
Educational services	19,200	20,000	24,400	23,400	(1,000)	9.3	8.7	9.7	9.6
Health care services	28,200	30,900	34,000	36,000	2,000	13.7	13.4	13.5	14.8
Information, culture and recreation	7,700	9,000	10,600	9,000	(1,600)	3.7	3.9	4.2	3.7
Accommodation and food services	11,700	14,700	14,500	14,100	(400)	5.7	6.4	5.8	5.8
Other services	9,800	10,200	10,200	12,500	2,300	4.8	4.4	4.1	5.1
Public administration	<u>7,900</u>	<u>9,200</u>	<u>7,400</u>	<u>7,600</u>	<u>200</u>	<u>3.8</u>	<u>4.0</u>	<u>2.9</u>	<u>3.1</u>
Total employed	205,700	231,000	251,500	242,900	(8,600)	100.0	100.0	100.0	100.0

<sup>1</sup> Place of residence basis; Industry classification based on NAICS

Source: Altus Economics based on data from Statistics Canada's Labour Force Survey

Figure 7

**Employment<sup>1</sup> by Industry, Ontario, 1996-2011**

	1996	2001	2006	2011	Change 2001-2011	1996	2001	2006	2011
	# persons employed (000s)					% distribution			
Primary	148	119	138	129	10	2.9	2.0	2.1	1.9
Manufacturing	906	1,067	1,001	795	(272)	17.5	18.0	15.5	11.8
Construction	262	334	403	443	109	5.1	5.6	6.2	6.6
Transportation and warehousing	243	278	292	322	44	4.7	4.7	4.5	4.8
Trade	777	932	1,006	992	60	15.0	15.7	15.6	14.7
FIRE	370	387	474	501	115	7.2	6.5	7.4	7.4
Prof., scient. and tech. services	315	439	449	557	118	6.1	7.4	7.0	8.3
Mgmt of companies/admin. services	178	239	291	289	50	3.4	4.0	4.5	4.3
Educational services	342	355	444	479	124	6.6	6.0	6.9	7.1
Health care services	502	561	635	766	206	9.7	9.5	9.8	11.4
Information, culture and recreation	234	302	319	346	44	4.5	5.1	4.9	5.1
Accommodation and food services	310	332	375	389	56	6.0	5.6	5.8	5.8
Other services	292	294	311	334	40	5.7	5.0	4.8	5.0
Public administration	<u>288</u>	<u>283</u>	<u>312</u>	<u>390</u>	<u>107</u>	<u>5.6</u>	<u>4.8</u>	<u>4.8</u>	<u>5.8</u>
Total employed	5,166	5,921	6,449	6,731	811	100.0	100.0	100.0	100.0

<sup>1</sup> Place of residence basis; Industry classification based on NAICS

Source: Altus Economics based on data from Statistics Canada's Labour Force Survey

### 3.3.2 Overview 2006 Census Employment by Sector in the City of London

Figure 8 illustrates London's employment by sector from the 2006 Census.

There are a number of major sectors in the local economy:

- General services is the largest sector of the local economy, representing 25% of total employment in the city, followed by trade (17%), health care services (13.9%) and manufacturing (11.6%);

Figure 8

Industry	City of London	Share of Total	Ontario	Share of Total
	Employment <sup>1</sup>		Employment <sup>2</sup>	
	Persons (000s)	Percent	Persons (000s)	Percent
Primary	1.6	0.8	138	2.1
Manufacturing	22.5	11.6	1,001	15.5
Construction	10.2	5.3	403	6.2
Transport., storage, comm.	12.1	6.3	659	10.2
Trade	31.9	16.5	1,006	15.6
FIRE	15.9	8.2	474	7.4
Educational services	16.8	8.7	444	6.9
Health care services	27.0	13.9	635	9.8
Public Admin.	7.3	3.8	312	4.8
Other services	<u>48.3</u>	<u>24.9</u>	<u>1,378</u>	<u>21.4</u>
Total	193.5	100.0	6,449	100.0

<sup>1</sup> Place of Work Employment  
<sup>2</sup> Place of Residence Employment  
Source: Altus Economics based on data from Statistics Canada, Census

- Compared to Ontario as a whole, the city is over-weighted in the health care sector, probably because the city is home to several major regional hospitals and health care research institutes; and
- The city is somewhat under-weighted in manufacturing and transportation sectors.

### 3.3.3 Major Employers in the City of London

Figure 9 presents the 30 largest employers in the city:

- The largest 4 employers in the city are in the broad public sector, including health care and education, in addition to public administration;
- The top private employer in the city is TD Canada Trust, which has long historical roots in London. The company continues to expand locally and has added some 470 employees to its payroll in recent years;
- London Life Insurance Co., another top private employer, reduced its local workforce by some 540 workers over the 2005-2010 period; and

Figure 9

**Top 30 Employers, City of London, 2010**

Employers	Number of Employees
	<i>Persons</i>
London Health Sciences Centre	10,555
Thames Valley District School Board	8,000
St. Joseph's Health Centre	5,400
The University of Western Ontario <sup>1</sup>	5,600
TD Canada Trust	3,200
The Corporation of The City of London	2,906
London Life Insurance Co.	2,000
General Dynamics Land Systems Canada	1,878
London District Catholic School Board	1,585
Stream Global Services	1,106
Bell Canada	1,053
Sifton Properties Limited	1,000
Sunvalley Foods A Division of Cargill Ltd.	1,000
Fanshawe College	884
3M Canada Inc.	800
Parkwood Hospital	762
Kellogg Canada Inc.	700
Citi Cards Canada	660
Sykes Assistance Services Corporation	656
Lawson Health Research Institute	600
Electro-Motive Diesel <sup>2</sup>	600
Trojan Technologies	600
DDM Plastics Inc.	572
Regional Mental Health Care Centre	558
Compass Group Canada, Beaver Ltd.	550
Voyageur Transportation Services	550
McCormick Canada Inc.	525
Brose Canada Inc.	500
Ontario Ministry of Transportation	475
Labatt's Breweries Ontario	466
<b>Total</b>	<b>55,741</b>

<sup>1</sup> Includes the Schulich School of Medicine and Dentistry and Robarts Research Institute.

<sup>2</sup> Recently the company has announced to completely shut down the plant.

Source: Altus Economics based on data from LEDC

- Some firms have entered the top employer lists since 2005, including Sifton Properties Limited, Trojan Technologies, DDM Plastics Inc., etc., illustrating the city's ability to foster and encourage growth of the local businesses.

### 3.3.4 Primary (National Resources and Agriculture)

The primary sector represents businesses and workers involved in the initial process of natural resources such as farming, fishing, mining and logging. As primary industry tends to be land based, cities in general tend to be

underweighted in this sector – the sector represented less than 1% of the London’s employment in 2006.

Employment in this sector declined marginally from 2001 to 2006 – a loss of an approximately 120 workers. Estimates for the current census period show that this sector likely contracted by a further 100 workers between 2006 and 2011.

Employment in the primary sector is expected to stabilize over the forecast period.

### 3.3.5 Manufacturing

At the 2006 Census, some 22,535 people were employed in the manufacturing sector locally, which is the second largest economic sector in the City of London, with 12% of the total employment. However, the recent economic downturn and the strong Canadian currency has taken a toll on this sector. It is estimated that the manufacturing sector’s workforce in the city of London contracted by some 3,200 positions during the 2006-2011 census period. As a result, the share of manufacturing employment in the city is estimated to be 10% in 2011.

Some notable losses include:

- In 2009, Gates Canada closed its London auto parts plant and moved its production to a plant in Windsor, affecting 179 positions;<sup>16</sup>
- Caterpillar, the parent company of Electro-Motive Diesel (EMD), announced a complete shutdown of its London plant, affecting about 450 manufacturing jobs<sup>17</sup>; and
- Accuride Canada’s local workforce remains below pre-recession levels<sup>18</sup>.

The local manufacturing sector has also seen some targeted expansions in key areas of advanced manufacturing and food processing:

- In 2011, Dr. Oetker Canada, a maker of frozen pizzas, desserts and dry baking mixes, announced its plan to build a new frozen pizza production facility in the city. The plant, which will act as a

<sup>16</sup> Service Canada, *London Labour Market Monitor*, January 2009.

<sup>17</sup> The Wall Street Journal, *Caterpillar Closes Plant in Canada After Lockout*, February 4, 2012.

<sup>18</sup> Service Canada, *London Labour Market Monitor*, July 2010.

production hub for the company's North American pizza operations, will employ over 125 workers in London and is expected to create some 300 additional jobs in the area<sup>19</sup>;

- Samsung Renewable Energy Inc. will build a new manufacturing plant in London to produce state-of-the-art solar modules for use in Ontario and for export around the world. The new facility is expected to create 200 long-term manufacturing positions<sup>20</sup>;
- In 2010, Kongsberg Gruppen AS, announced plans to open a facility in London for the PROTECTOR Remote Weapon Stations family. Initially, the plant will employ 25-30 persons and it is expected to increase to more than 100 employees when fully operational<sup>21</sup>;
- KACO new energy, the world's second largest solar inverter manufacturer, recently opened its first manufacturing facility in North America in London's Skyway Industrial Park, with a goal to hire over 100 full-time employees by the end of 2011<sup>22</sup>;
- Arvin Sango Inc., an automotive parts supplier, started the construction of a new facility in Innovation Park in October 2011. The facility will be Arvin Sango's first plant in North America and initially will employ 60 employees. The plant will supply Toyota Motor Manufacturing Canada with exhaust systems<sup>23</sup>; and
- Recently, General Dynamics Land System Canada has been awarded a \$1 billion federal defence contract, which includes the upgrade 550 Canada's LAV III light armoured vehicles. The five-year upgrading contract will protect existing jobs at the company's London plant<sup>24</sup>.

In 2011, it is estimated that there are some 19,320 people working in the manufacturing sector, down somewhat from 2006. However, the

<sup>19</sup> London Economic Development Corporation, *Dr. Oetker Announces Plans for New Production Facility in London Ontario, New Release*, July 27, 2011.

<sup>20</sup> London Economic Development Corporation, *Samsung Agreement to Bring 200 Long-term Manufacturing Jobs to London Ontario, New Release*, September 8, 2011.

<sup>21</sup> London Economic Development Corporation, *Kongsberg to open new facility in London, Ontario, New Release*, March 05, 2010.

<sup>22</sup> London Economic Development Corporation, *Grand opening of North American KACO Production in London a Huge Success, New Release*, May 17, 2011.

<sup>23</sup> London Economic Development Corporation, *Automotive Parts Supplier Breaking Ground in London, Ontario, New Release*, October 20, 2011.

<sup>24</sup> London Free Press, *\$1B Deal for London Wheels, New Release*, October 21, 2011.



manufacturing sector in the city is gradually transforming toward targeted advanced manufacturing and food processing segments.

Over the coming years, the advanced manufacturing segment will continue to outgrow the overall manufacturing sector as expected by the Ontario Ministry of Finance. During the forecast period, the city's manufacturing sector will likely stabilize and gradually increase its employment, although at a slower pace than the overall employment growth in London.

### 3.3.6 Transportation and Communication

The 2006 Census shows that London's transportation and communication sector accounted for 6.3% of the city's total employment, marginally lower than the 6.8% reported in the 2001 Census. However, since the 2006 Census, there have been a number of positive developments in transportation and communications:

- In 2009, the London International Airport received \$11 million to establish an International Air Freight Transshipment Centre and the airport has been designated as a Duty Free Zone. The project is part of the City's Airport/401/402 Gateway Strategy and will help the city establish itself as a regional logistic hub. The project is expected to create 150 new jobs<sup>25</sup>;
- In 2009, some 476,192 passengers passed through the London International Airport<sup>26</sup>. This number is expected to grow over the years as airlines add new flights. United Airlines started to offer two direct flights to and from Chicago in 2009<sup>27</sup>;
- The Storage Company opened a new location in the east part of London in 2009, offering 300 storage units and could eventually expand to 650 units<sup>28</sup>; and
- Fraser Direct, a regional logistic company, opened a new facility in London at the Skyway Industrial Park. The company provides

<sup>25</sup> The City of London, *Our Economy: Progress Report, 2007-2010*, April 3, 2011.

<sup>26</sup> Ibid.

<sup>27</sup> Service Canada, *London Labour Market Monitor*, September 2009.

<sup>28</sup> Ibid.

customs brokerage, logistic management, freight forwarding and other services. The new facility is expected to employ 13 workers<sup>29</sup>.

The sector is estimated to employ 12,210 workers in 2011, a growth of about 80 jobs over the previous census period. Going forward, various development initiatives underway will further promote growth in this sector.

### 3.3.7 Trade

The largest sector in the City of London is trade, employing some 17% of the city's workforce in 2006. This sector is composed of both retail stores and wholesale distributors. Employment in the trade sector generally follows local population growth. The City of London is also an important regional retail centre for surrounding communities, including parts of Oxford, Elgin, Lambton and Huron counties. Expected growth in these surrounding centres will also benefit the trade sector in London, in addition to the city's own population growth.

Some recent developments have had positive impacts on the city's trade sector:

- The City's downtown revitalization strategy has been successful in strengthening the retail and service commercial sector in the core. Since 2008, over 1,500 new residential units have been created in downtown London. Going forward, the announced new School of Applied and Performing Arts downtown campus of Fanshawe College will bring up to 1,500 students to the downtown core. The increasing traffic to the downtown will be a boost to the downtown retail sector;
- Target, a top U.S. discount retailer, is coming to Canada. It has taken over Zeller's store leases across Canada and is going to remodel the Zeller's stores into its own brand. Two locations in London, Westmount Shopping Centre and Masonville Place, are among the first stores to be open in 2013. This is going to bring some fresh blood and excitement to the city's retail sector; and
- Goemans Appliances opened a location in the former Home Depot Building in London at the Wharncliffe Road in 2009. The large store

<sup>29</sup> London Economic Development Corporation, *Air Cargo Terminal Grows with Addition of Fraser Direct*, New Release, October 29, 2010.

sells major kitchen appliances, barbeques, central vacuums, fireplaces and other kitchen items<sup>30</sup>.

Further efficiencies in retail, especially the growth in the online shopping segment, will moderate the pace of employment growth in this sector, but this trend will be mitigated somewhat by expanded job opportunities in the wholesale trade sector and London's role as a regional retail centre. Over the forecast period, the trade sector will likely expand at a marginally higher rate than the overall employment in London.

### 3.3.8 Finance, Insurance and Real Estate (FIRE)

The FIRE sector is estimated to account for some 8.9% of the city's employment in 2011. This sector consists of a wide range of business, ranging from banking, trust companies and credit unions to insurance firms, investment dealers and offices of real estate agents and brokers. Major companies in the city's FIRE sector include:

- TD Canada Trust: 3,200 Employees
- London Life Insurance Co.: 2,000 Employees
- Citi Cards Canada: 660 Employees

TD Canada has deep roots in the city and has been expanding its workforce over the years. Compared to 2005, TD Canada Trust increased its employment by approximately 470 workers in 2010, helping the company become the top private employer in the city.

London Life Insurance, another major player in the city's FIRE sector, has seen its workforce reduced by some 540 workers during the 2005-2010 period while Citi Cards Canada, which bought TD Canada Trust's MasterCard business in 2003, has kept its employment relatively stable over the same period.

Over the forecast period, growth prospects for the FIRE sector will remain challenged by global and regional trends in finance and from competition from other major financial centres in the province, such as Toronto and the Waterloo Region. Employment growth rate is likely to lag overall growth in the city.

<sup>30</sup> Service Canada, *London Labour Market Monitor*, September 2009.

### 3.3.9 Government Service/Public Administration

The government service sector is estimated to represent 3.9% of the city's employment, supporting 7,480 jobs in 2011, an increase of some 145 jobs from the 2006 Census. There are various municipal, provincial and federal government service offices located in the City of London, including:

- The Corporation of The City of London: 3,200 Employees
- Ontario Ministry of Transportation: 475 Employees
- Canada Post Corporation: 452 Employees
- Elgin-Middlesex Detention Centre: 225 Employees

During the last several years, the provincial and federal governments have increased efficiency and reorganized their operations, which have had some effects on local operations. The Ontario Ministry of Transportation reduced its headcount from 700 workers in 2005 to 475 workers in 2010 while Canada Post has rationalized some 110 positions from its payroll during the same period. A Mitigating force has been local governments and other public agencies which have seen modest workforce expansions over the same period.

Moving forward, the government service sector will continue to face challenges as the Ontario and federal governments remain under budget constraints and try to further improve their operation efficiencies. While local public services will expand modestly through the forecast with the growing community, total employment growth in the government service sector is expected to lag the overall employment growth in the city.

### 3.3.10 Education

In 2011, the education sector is estimated to represent some 8.3% of total employment in London, lower than the 8.7% reported in the 2006 Census. In 2010, the major education employers were:

- Thames Valley District School Board: 8,000 Employees
- The University of Western Ontario: 5,600 Employees
- London District Catholic School Board: 1,585 Employees
- Fanshawe College of Applied Arts and Technology: 884 Employees

The University of Western Ontario is one of Canada's leading research universities, with an annual enrolment of over 34,000 students for full-and

part-time, and attracts some \$220 million each year in research grants<sup>31</sup>. The University continues to make significant investments, including:

- The new building for the Richard Ivey School of Business: the 270,000 sq. ft. building is currently under construction with a total estimated cost of \$110 million; and
- International Composites Research Centre (ICRC): a planned joint venture with the Fraunhofer Society of Germany is estimated to cost some \$35 million and will further broaden the University's research into the lightweight material sector.

Fanshawe College of Applied Arts and Technology, one of the largest colleges in Ontario, serves approximately 15,000 full-time students each year<sup>32</sup>. The College has been expanding during the recent years:

- In 2011, the College opened its new Centre for Applied Transportation Technologies, which costs \$32 million and contains 148,000 sq. ft. space. The Centre accommodates up to 1,500 students and offers a variety of programs, including auto mechanics and body repair, heavy truck maintenance, etc.; and
- The College is also working on a new School of Applied and Performing Arts in London's downtown core, which will offer programs related to theatre, design, digital median, culinary and hospitality to about 1,500 students.

As a result of these and other positive developments, the city's education sector promises to be a strong performer over the forecast period, albeit with challenges. The Ontario Government has scaled back research funding by some \$66 million at universities and hospitals.<sup>33</sup> Over the long-term, the employment growth in the sector is expected to improve and somewhat outpace the local economy as a whole.

<sup>31</sup> London Economic Development Corporation's website.

<sup>32</sup> Ibid.

<sup>33</sup> The Globe and Mail, Ontario, *Universities, Hospitals 'in Shock' after \$66 million Funding Cut*, January 9, 2012.

### 3.3.11 Health Care

Health care is the third largest sector in the City of London, representing an estimated 15% of the city's employment in 2011. The largest hospitals and health care facilities in London include:

- London Health Sciences Centre: 10,555 Employees
- St. Joseph's Health Centre: 5,400 Employees
- Parkwood Hospital: 762 Employees
- Lawson Health Research Institute: 600 Employees
- Regional Mental Health Care Centre: 558 Employees

Over the last several years, London's hospitals and health care facilities have undergone a major restructuring – Phase 2 of the Milestone 2 was completed in August 2011. The Milestone project is a multi-year, multi-phase joint restructuring initiative between London Health Sciences Centre (LHSC) and St. Joseph's Health Care<sup>34</sup>:

- The Milestone 1 project was conducted between 1998 and 2005: This milestone represented 42 internal hospital moves and 23 clinical program transfers between LHSC and St. Joseph's. Construction costs for Milestone 1 were \$216 million for LHSC and \$69 million for St. Joseph's;
- Phase 1 of the Milestone 2 project was conducted between 2007 and 2009: This phase of the restructuring project was focused on construction and renovations at various St. Joseph's and LHSC hospital sites;
- Phase 2 of the Milestone 2 project was conducted between 2008 and 2011: This restructuring phase included 23 internal hospital moves and 5 clinical program transfers between LHSC and St. Joseph's. In addition, some 106,000 sq. ft. of space was renovated at St. Joseph's and the interior construction of the North Tower was completed at LHSC's Victoria Hospital. Total construction costs for Milestone 2, Phase 2 were \$211 million for LHSC and \$49 million for St. Joseph's; and
- Phase 3 of the Milestone 2 project started in August 2011 and is expected to be fully complete in 2015.

<sup>34</sup> The information is from the London Health Sciences Centre's website, *Acute Care Restructuring*.

The restructuring has improved the efficiency and patient care in London's health care system and generated additional job opportunities for health care workers as older hospitals were renovated and new space was created.

The local health care sector also benefits from the research conducted at the University of Western Ontario's Schulich School of Medicine & Dentistry. For example, recently, the first and only preventative HIV vaccine, developed by Dr. Chil-Yong Kang, has received approval by the United States Food and Drug Administration (FDA) to start human clinical trials<sup>35</sup>. Such medicinal research could help foster the city's biomedical industry.

These positive developments with a growing and aging local population, and the City's Medical Device Strategy mean that employment in the health care sector should increase over the forecast period, and is likely to outperform the city as a whole.

### 3.3.12 General Services

In 2011, there were an estimated 48,440 workers employed in various general service industries, including accommodation, culture and recreation, information; and professional, scientific and technical services, representing over a quarter of the city's employment. One of the main driving forces to the growth has been the business and professional service sector. There have been several positive developments in this sector:

- Recently, ALLIANCE iCommunications, a web-enabled, full service customer contact centre, has announced it will be adding 125 new jobs in the city to service their international clientele<sup>36</sup>;
- Stream Global Services, premium business process outsourcing (BPO) provider of sales, customer care and technical support services for companies, is planning to add 200 new jobs in the city<sup>37</sup>; and
- In June 2011, Exp, a multi-national provider of professional, technical and strategic services to the world's built and natural environments, recently opened a new location in London, servicing the

<sup>35</sup> The University of Western Ontario's website, *HIV/AIDS Vaccine Developed at Western Proceeding to Human Clinical Trials*, December 20, 2011.

<sup>36</sup> London Economic Development Corporation, *325 jobs announced: ALLIANCE iCommunications and Stream Global Services*, September 01, 2011.

<sup>37</sup> Ibid.

London/Windsor/Sarnia area. More than 60 professional workers are expected to occupy the 17,000 sq. ft. office space.<sup>38</sup>

The City also works hard to establish London as the entertainment and sports capital of South-Western Ontario – the City Council has directed almost \$300 million over the past 15 years towards public facilities such as the Western Fair and the London Convention Centre.<sup>39</sup> Another major recreational venue is the John Labatt Centre. Each year the centre is estimated to attract some 500,000 visitors<sup>40</sup>, generating millions in tourism revenues.

Another growing segment of the local economy is the information and communication technology industry:

- London has more than 300 IT companies focused in on various sectors, including interactive game development, financial services and TV cable system middleware<sup>41</sup>;
- One of the top companies is Digital Extremes, one of the world’s leading development studios in the interactive entertainment industry<sup>42</sup>;
- London is also part of the TechAlliance of Southwestern Ontario, a non-profit organization helping entrepreneurs to launch new ventures and succeed in the technology, life sciences and advanced manufacturing sectors<sup>43</sup>.

As forecasted by the Ontario Ministry of Finance, general service sector industries such as business and professional services will be one of the main drivers for employment growth over the coming decades. During the forecast period, employment growth in other service industries is expected to be faster than the city’s average.

### 3.4 EMPLOYMENT PROJECTIONS BY SECTOR

Figure 10 presents employment projections for the City of London and the Province of Ontario by sector:

<sup>38</sup> London Economic Development Corporation, *Exp London Grand Opening*, June 01, 2011.

<sup>39</sup> The City of London, *Our Economy: Progress Report, 2007-2010*, April 3, 2011.

<sup>40</sup> Ibid.

<sup>41</sup> London Economic Development Corporation, *Information & Communication Technologies*

<sup>42</sup> Ibid.

<sup>43</sup> The TechAlliance of Southwestern Ontario’s website.



- The city's employment growth rates are projected to be marginally lower than the provincial average;
- Throughout the projection period, the fastest growing sectors in the city are transportation, trade, education, health care and other services;
- Manufacturing will continue to experience slow growth during the forecast period, illustrating the restructuring currently underway in the local industry and the challenges ahead attracting targeted investment in advanced manufacturing; and
- This only presents the base scenario for employment growth over the forecast period. Employment growth could be significantly higher, in part, due to the city's success in attracting new business investment. On the other hand, employment growth could be lower if the current economic crisis in the EU and US persist longer.

Figure 10

### Employment, Ontario and City of London, 2001-2041

	Actual		Estimate	Projection			Annual Percent Growth			
	2001	2006	2011	2021	2031	2041	2001-2011	2011-2021	2021-2031	2031-2041
	Number of Persons Employed (000s)						Percent			
<b>Ontario<sup>1</sup></b>										
Primary	118.7	138.1	129.1	131.5	133.5	137.0	0.84	0.19	0.15	0.26
Manufacturing	1,067.3	1,000.5	794.9	863.1	912.5	997.5	(2.90)	0.83	0.56	0.89
Construction	333.8	402.9	442.5	540.0	608.2	725.9	2.86	2.01	1.20	1.78
Transport., storage, comm.	630.2	658.5	722.6	835.8	917.7	1,058.7	1.38	1.47	0.94	1.44
Trade	932.2	1,006.1	992.4	1,128.8	1,224.1	1,388.3	0.63	1.30	0.81	1.27
FIRE	386.6	474.1	501.3	575.8	629.6	722.4	2.63	1.40	0.90	1.38
Educational services	354.5	444.3	478.7	552.8	606.3	698.6	3.05	1.45	0.93	1.43
Health care services	560.7	634.7	766.4	870.4	949.8	1,086.8	3.17	1.28	0.88	1.36
Public Admin.	282.6	311.7	389.7	405.7	418.1	439.5	3.27	0.40	0.30	0.50
Other services	1,253.8	1,377.9	1,513.7	1,752.8	1,925.7	2,223.4	1.90	1.48	0.94	1.45
<b>Total</b>	<b>5,920.4</b>	<b>6,448.8</b>	<b>6,731.3</b>	<b>7,656.7</b>	<b>8,325.6</b>	<b>9,478.0</b>	<b>1.29</b>	<b>1.30</b>	<b>0.84</b>	<b>1.30</b>
<b>London<sup>2</sup></b>										
Primary	1.7	1.6	1.5	1.5	1.5	1.5	(1.37)	(0.05)	0.15	0.26
Manufacturing	23.3	22.5	19.3	20.3	21.5	23.5	(1.85)	0.50	0.56	0.89
Construction	8.9	10.2	10.8	10.8	11.7	12.7	1.96	(0.04)	0.79	0.84
Transport., storage, comm.	12.2	12.1	12.2	14.7	16.1	18.6	0.04	1.84	0.94	1.44
Trade	30.0	31.9	29.0	32.7	36.0	40.3	(0.35)	1.23	0.95	1.13
FIRE	14.7	15.9	16.8	18.1	18.9	20.2	1.32	0.77	0.41	0.69
Educational services	14.7	16.8	15.8	18.3	19.4	22.1	0.75	1.48	0.59	1.33
Health care services	24.9	27.0	28.4	32.5	35.9	41.6	1.32	1.36	1.01	1.49
Public Admin.	6.5	7.3	7.5	7.5	7.7	8.1	1.38	0.05	0.30	0.50
Other services	42.5	48.3	48.4	55.3	60.7	70.9	1.32	1.33	0.94	1.57
<b>Total</b>	<b>179.4</b>	<b>193.5</b>	<b>189.7</b>	<b>211.6</b>	<b>229.3</b>	<b>259.6</b>	<b>0.56</b>	<b>1.10</b>	<b>0.81</b>	<b>1.25</b>

<sup>1</sup> Place of residence basis; <sup>2</sup> Place of work basis

Source: Forecasts: Altus Economics, Historical: Statistics Canada

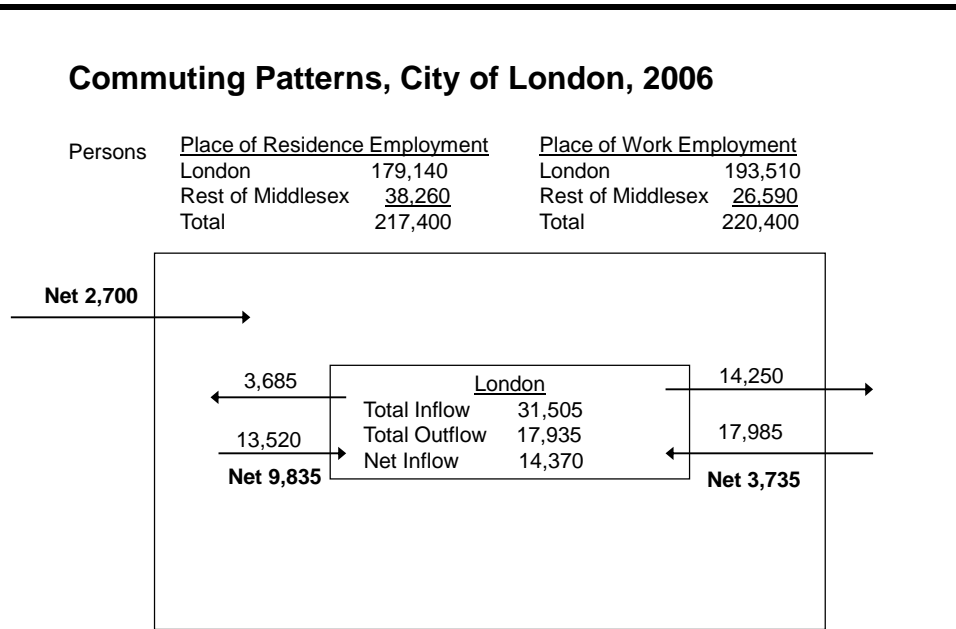
### 3.5 EMPLOYMENT PROJECTION FOR MIDDLESEX COUNTY

The focus of the analysis throughout the economic section has been on employment prospects within the City of London. To produce population forecast for the Middlesex County, employment prospects for the City of London are required to be translated into employment growth for Middlesex County.

Figure 11 illustrate the commuter patterns for in the City of London in the 2006 Census, which provides a link between the city’s employment forecast and the county’s employment prospective:

- According to the 2006 Census, there are 193,510 jobs in the City of London, representing 88% of all jobs in Middlesex County;
- Approximately 91% of the jobs in the City of London were filled by persons living somewhere in Middlesex County. Only some 17,985 employees who worked in the city commute from outside of the county in 2006;

Figure 11



Source: Altus Group Economic Consulting based on Census Canada

- The city provided some 13,520 employment opportunities to residents who live elsewhere within Middlesex County; and

- Overall, there were some 2,700 workers commuting from outside of Middlesex County to work each day in 2006 Census.

Figure 12

<b>Employment</b>	<b>City of London</b>	<b>Middlesex County</b>
	<i>Persons</i>	
2001	179,365	201,495
2006	193,495	220,100
2011	189,674	215,733
2016	203,218	231,154
2021	211,630	240,771
2026	219,116	249,306
2031	229,337	260,897
2036	244,016	277,616
2041	259,571	295,273
<b>Total Change</b>		
2001-2011	10,309	14,238
2011-2021	21,955	25,038
2021-2031	17,707	20,127
2031-2041	30,234	34,376
2011-2041	69,897	79,540
<b>Annual Average Change</b>		
2001-2011	1,031	1,424
2011-2021	2,196	2,504
2021-2031	1,771	2,013
2031-2041	3,023	3,438
2011-2041	2,330	2,651
<b>Annual Percent Change</b>		
2001-2011	0.6	0.7
2011-2021	1.1	1.1
2021-2031	0.8	0.8
2031-2041	1.2	1.2
2011-2041	1.1	1.1

Source: Projections: Altus Economics; Historical: Census of Canada

Figure 12 presents forecast of employment growth for the City of London and Middlesex County over the 2011-2041 period:

- In 2006 Census, the City of London represented some 88% of total jobs in Middlesex County, marginally changed from the share of 89%

in the 2001 Census. This ratio is expected to stay steady over the forecast period; and

- Overall, Middlesex County is estimated to create just under 79,540 jobs during the 2011-2041 period, of which approximately 9,640 jobs will be located outside of the City of London.

## 4 POPULATION PROJECTIONS

This chapter presents population projections for Middlesex County and the City of London. These projections are influenced by the economic scenario and employment forecasts presented in Chapter 3 and other demographic factors such as fertility and mortality rates.

### 4.1 PROJECTION FRAMEWORK

#### 4.1.1 The Cohort Survival Model

The widely used cohort survival methodology is employed in order to project population for Middlesex County through to the year 2041. This method uses historical data from the Census of Canada and projects future population based on assumptions for the three components of population growth:

- **Births:** Historical fertility rate trends within Middlesex County and anticipated future trends across Ontario and Canada are used to derive expected fertility patterns in Middlesex County over the projection period;
- **Deaths:** Historical mortality rates by age and sex within Middlesex and anticipated future trends across Ontario and Canada are used to derive expected mortality patterns in Middlesex county over the projections period; and
- **Net Migration:** Historical patterns of migration (including international, inter-provincial and intra-provincial) are considered in the model, and anticipated future migration flows are projected to:
  - Satisfy local labour force requirements in conjunction with the employment forecasts presented in Chapter 3; and
  - Account for potential migration flows of non-labour force related migrants such as retirees.

The cohort survival model is based on population growth in five-year increments consistent with the five-year cycle of the Census of Canada.

#### 4.1.2 City of London Population Projection Model

A share capture model by age and sex is used to project population in the City of London over the projection period. This model examines the

historical trends in the City of London's share capture of Middlesex population and projects population based on future share capture assumptions.

## 4.2 BIRTH

### 4.2.1 Methodology

The number of births in each period of the projection is derived using the standard births methodology of the cohort survival approach. Future birth rates are assumed by age of mother and applied to the female population in each period (including an allowance for recent migrants). Typically, women in the 20-34 age cohort account for the bulk of children born.

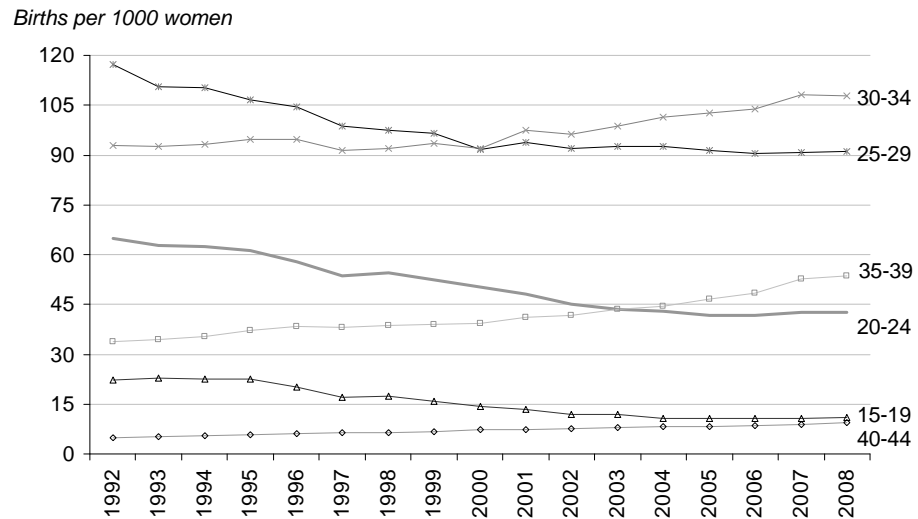
### 4.2.2 Recent Trends

Figure 13 presents the recent trends in fertility rates in Ontario:

- Birth rates for mothers aged between 15 and 29 declined significantly over the 1992-2008 period while rates for mothers aged between 30 to and 49 increased, however, at a slower pace. As a result, the total fertility rate for Ontario declined over the period;
- However, during the latter half of the last decade, birth rates for younger mothers have stabilized, even increased slightly, while birth rates for older mothers continue to rise. As a result, the total fertility rate for the province has increased; and
- In the recent population projection, Statistics Canada assumes this trend will continue over the coming decades and forecasts the total fertility rate for Ontario will marginally increase from 1.56 in 2009 to 1.63 in 2036 under the medium growth scenario (Figure 14).

Figure 13

**Birth Rates by Age of Mother, Ontario, 1992-2008**



Source: Altus Group Economic Consulting based on data from Statistics Canada

Figure 14

**Total Fertility Rate<sup>1</sup> Assumptions  
Statistics Canada Projections, Ontario, 1996-2036**

	Growth Scenarios		
	Low	Medium	High
1996	1.60	1.60	1.60
2006	1.52	1.52	1.52
2036	1.44	1.63	1.81
2009 <sup>2</sup>	1.56	1.56	1.56

<sup>1</sup> Sum of fertility rates across all age groups

<sup>2</sup> Latest actual data

Source: Altus Economics based on Statistics Canada's report, *Population Projections for Canada, Provinces and Territories*, 2010

**4.2.3 Projections 2006-2041**

Figure 15 shows the historical and projected fertility rates by age group for Middlesex County. This report assumes the total fertility rate for the county will gradually increase to the level forecasted by Statistics Canada for the province during the 2021-2026 period and would stay constant thereafter.

Figure 15

<b>Fertility Rate, Middlesex County, 1996-2041</b>									
	1996- 2001	2001- 2006	2006- 2011	2011- 2016	2016- 2021	2021- 2026	2026- 2031	2031- 2036	2036- 2041
<b>Age Groups</b>	<i>Rates per one thousands women (Annual Average Rate)</i>								
15-19	0.08	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09
20-24	0.26	0.26	0.27	0.27	0.28	0.28	0.28	0.28	0.28
25-29	0.48	0.47	0.49	0.50	0.51	0.52	0.52	0.52	0.52
30-34	0.47	0.46	0.48	0.49	0.49	0.50	0.50	0.50	0.50
35-39	0.20	0.19	0.20	0.20	0.21	0.21	0.21	0.21	0.21
40-44	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04
45-49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>1.53</b>	<b>1.49</b>	<b>1.56</b>	<b>1.58</b>	<b>1.61</b>	<b>1.63</b>	<b>1.63</b>	<b>1.63</b>	<b>1.63</b>

Source: Forecast: Altus Economics; Historical: Statistics Canada

The resulting number of births is illustrated in Figure 16:

- During the 2006-2011 census period, it is estimated to be some 23,215 births, an increase from the previous census period; and
- As fertility rates rise and the “baby echo” generate ages through the high-fertility years, the number of births will increase over the next 15 years, and stay relatively constant subsequently.

Figure 16

<b>Total Births, Middlesex County, 1996-2041</b>				
		Male	Female	Total
<b>Census Periods</b>		<i>Persons</i>		
1996-2001	a	11,850	11,059	22,909
2001-2006	a	11,016	10,574	21,590
2006-2011	e	11,910	11,305	23,215
2011-2016	f	12,765	12,120	24,885
2016-2021	f	13,505	12,820	26,325
2021-2026	f	14,000	13,290	27,290
2026-2031	f	14,105	13,390	27,495
2031-2036	f	14,280	13,555	27,835
2036-2041	f	14,745	14,000	28,745

a: Final data

e: Final data and preliminary post-censal estimates

f: Forecasts by Altus Group Economic Consulting

Source: Altus Economics based on data from Statistics Canada



## 4.3 DEATHS

### 4.3.1 Methodology

The projections of the number of deaths in Middlesex County over the forecast period rely on the standard deaths methodology used in cohort survival models. Death rates are assumed by age and sex cohort, and applied to the population by age and sex in each period. The major assumptions applied to this model are modest declines in death rates for all age groups over the coming decades.

### 4.3.2 Mortality Rates

Figure 17 presents the historical and projected mortality rates by age and sex for Middlesex County up to 2041:

- Research conducted by the US Census Bureau was employed in formulating the forecast, which assumes a generally declining mortality rate by age over the coming decades. This is a generally standard assumption, broadly used by other demographic studies and
- Continued advances in health care, disease treatment, improvements in nutrition and real personal wealth are the driving force behind this downward trend, as they will continue to extend life expectancy and reduce the likelihood of infant death.

### 4.3.3 Projections 2006-2041

Figure 18 shows the estimated number of deaths based on the mortality rate forecasts for Middlesex County. Despite declining mortality rates, the number of deaths is going to increase over the forecast period, because a larger share of the local population will age into their higher-mortality years.

Figure 17

**Mortality Rates, Middlesex County, 1996-2041**

Age Groups	1996- 2001	2001- 2006	2006- 2011	2011- 2016	2016- 2021	2021- 2026	2026- 2031	2031- 2036	2036- 2041
<b>Male</b>									
	<i>Deaths per 1,000 Population</i>								
Infant	5.9	6.4	6.0	5.6	5.2	4.8	4.4	4.0	3.5
1-4	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
5-9	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
10-14	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
15-19	0.5	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5
20-24	0.8	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5
25-29	0.6	0.9	0.8	0.8	0.7	0.7	0.7	0.6	0.6
30-34	1.0	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.0
35-39	1.6	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.0
40-44	1.9	1.8	1.8	1.7	1.7	1.6	1.6	1.6	1.5
45-49	2.7	3.7	3.6	3.4	3.3	3.1	3.0	2.8	2.6
50-54	6.2	5.2	4.9	4.6	4.3	4.0	3.7	3.4	3.1
55-59	8.4	8.2	7.7	7.2	6.7	6.2	5.7	5.2	4.7
60-64	14.1	12.5	11.8	11.1	10.4	9.6	8.9	8.2	7.5
65-69	22.7	19.4	18.3	17.3	16.2	15.2	14.2	13.1	12.1
70-74	39.6	33.5	31.7	30.0	28.2	26.5	24.7	23.0	21.2
75-79	69.4	50.3	48.1	45.9	43.7	41.5	39.3	37.0	34.8
80-84	103.6	97.6	94.1	90.6	87.0	83.5	79.9	76.4	72.9
85-89	177.4	134.1	130.0	125.9	121.8	117.7	113.6	109.5	105.5
90+	244.6	227.3	223.8	220.3	216.9	213.4	209.9	206.4	203.0
<b>Female</b>									
	<i>Deaths per 1,000 Population</i>								
Infant	2.9	5.1	4.8	4.5	4.2	3.9	3.5	3.2	2.9
1-4	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
5-9	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
10-14	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
15-19	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
20-24	0.1	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2
25-29	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2
30-34	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3
35-39	0.8	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5
40-44	1.1	1.3	1.3	1.2	1.1	1.1	1.0	1.0	0.9
45-49	2.2	2.1	2.0	1.9	1.8	1.7	1.6	1.5	1.4
50-54	4.0	3.3	3.1	2.9	2.7	2.6	2.4	2.2	2.1
55-59	6.5	5.1	4.9	4.8	4.6	4.4	4.2	4.0	3.8
60-64	7.7	8.4	8.1	7.9	7.6	7.4	7.2	6.9	6.7
65-69	12.9	12.0	11.8	11.7	11.5	11.4	11.2	11.0	10.9
70-74	21.0	19.0	18.7	18.4	18.1	17.9	17.6	17.3	17.0
75-79	37.8	32.1	31.3	30.5	29.6	28.8	28.0	27.1	26.3
80-84	66.2	63.3	61.0	58.8	56.5	54.2	52.0	49.7	47.4
85-89	112.1	97.1	93.1	89.2	85.2	81.2	77.2	73.2	69.3
90+	196.4	205.0	197.6	190.2	182.7	175.3	167.9	160.4	153.0

Source: Altus Economics based on Statistics Canada data

Figure 18

<b>Total Deaths, Middlesex County, 1996-2041</b>				
		<u>Male</u>	<u>Female</u>	<u>Total</u>
<u>Census Periods</u>		<i>Persons</i>		
1996-2001	<i>a</i>	7,658	7,675	15,333
2001-2006	<i>a</i>	7,545	7,826	15,371
2006-2011	<i>e</i>	8,325	8,475	16,800
2011-2016	<i>f</i>	9,165	9,320	18,485
2016-2021	<i>f</i>	9,955	10,045	20,000
2021-2026	<i>f</i>	10,825	10,845	21,670
2026-2031	<i>f</i>	11,830	11,890	23,720
2031-2036	<i>f</i>	12,895	13,095	25,990
2036-2041	<i>f</i>	13,870	14,305	28,175

*a*: Final data  
*e*: Final data and preliminary post-censal estimates  
*f*: Forecasts by Altus Group Economic Consulting

Source: Altus Economics based on data from Statistics Canada

#### 4.4 NATURAL INCREASE

Based on the forecasts for the number of births and deaths, the natural increase of the county's population could be estimated (Figure 19):

- Although the number of births increases over the forecast period, the pace of its increase is estimated to be much slower than the growth in the number of deaths;
- As a result, the net natural increase of the county's population will continue to moderate over the forecast period, however, it will still be positive at the end of the forecast period.

Figure 19

<b>Total Natural Increase, Middlesex County, 1996-2041</b>				
		<u>Births</u>	<u>Deaths</u>	<u>Net Natural Increase</u>
<u>Census Periods</u>		<i>Persons</i>		
1996-2001	<i>a</i>	22,909	15,333	7,576
2001-2006	<i>a</i>	21,590	15,371	6,219
2006-2011	<i>e</i>	23,215	16,800	6,415
2011-2016	<i>f</i>	24,885	18,485	6,400
2016-2021	<i>f</i>	26,325	20,000	6,325
2021-2026	<i>f</i>	27,290	21,670	5,620
2026-2031	<i>f</i>	27,495	23,720	3,775
2031-2036	<i>f</i>	27,835	25,990	1,845
2036-2041	<i>f</i>	28,745	28,175	570

*a*: Final data  
*e*: Final data and preliminary post-censal estimates  
*f*: Forecasts by Altus Group Economic Consulting

Source: Altus Economics based on data from Statistics Canada

## 4.5 MIGRATION

Net migration refers to the difference between the number of people moving to a local area from other areas and the number of people moving out of a local area. Net migrants are often categorized from where they come or go:

- **Net International Migration:** Movement to and from other countries;
- **Net Interprovincial Migration:** Movement to and from other provinces; and
- **Net Intraprovincial Migration:** Movement within a single province.

### 4.5.1 Methodology

Projections for net migration are based on trends in the local economy and other demographic factors:

- In general, migration responds to underlying economic conditions, especially labour demand. Based on certain labour force activity rates (the participation rate and the unemployment rate), the potential employment growth implies potential demographic requirements. If employment growth is slower than the demographic labour force base, unemployment will rise, and residents will begin to leave the region seeking jobs elsewhere – implying a net-out migration scenario. On the other hand if employment growth is faster than the demographic labour force base, unemployment will fall, wages will rise and migrants from elsewhere in Ontario, Canada and abroad will be attracted into the region – implying a net-in migration scenario; and
- Some other demographic factors also have impacts on migration patterns. For example, many migrants in the 55+ age cohorts are moving within Ontario for lifestyle reasons, particularly in retirement. The Middlesex County population projections also take these migrants into account over and above the employment motivated migrants.

### 4.5.2 Labour Force Needs Model

Figure 20 illustrates a summary of projected net migration demand as derived from the labour force needs model:

- Total employment in Middlesex County is expected to increase by some 79,100 workers during the 2011-2041 period;
- Correspondingly, the labour force is required to increase by a similar amount (73,500 people) to satisfy the anticipated employment growth;
- Not all employment growth will be accommodated by new members of the labour force, some 5,600 of the net new jobs expected to be created over the 2011-2041 period will be filled by the unemployed, leading to a reduction of the number of persons unemployed in Middlesex from some 21,000 in 2011 to 15,400 by 2041. All of this reduction is expected to occur in the first five years (2011-2016) leading to lower labour force growth, and thus lower requirements for net migration in that period;
- Figure 20 also illustrates that, given the pace of required labour force growth (73,500 persons) and the age structure of the population, growth from natural means (births minus deaths – expected to contribute some 24,535 net new persons to the county over the 30-year period) alone is insufficient to support the anticipated demographic requirements. Fully 108,462 net new migrants from outside of the country are required in order to support this anticipated job growth.

Figure 20

**Labour Force Needs Model, Middlesex County**

Total	2006	2011	2016	2021	2026	2031	2036	2041	Total Growth 2011-2041
Employment (Persons)	217,400	214,200	229,100	238,700	247,300	258,900	275,600	293,300	79,100
Unemployment Rate (%)	6.1	8.9	5.2	5.0	5.0	5.0	5.0	5.0	
Labour Force (Persons)	231,400	235,200	241,700	251,300	260,300	272,500	290,100	308,700	73,500
Participation Rate (%)	68.0	65.7	64.2	63.8	63.2	63.6	65.5	67.4	
<b>Population</b>									
15-84	340,060	357,791	376,610	393,975	412,082	428,248	443,022	458,218	100,427
0-14 and 85+	82,270	81,361	84,445	89,911	95,523	100,983	107,553	113,931	32,570
Total	422,330	439,152	461,055	483,885	507,604	529,231	550,575	572,149	132,997
Natural Increase (Births - Deaths)		6,415	6,400	6,325	5,620	3,775	1,845	570	24,535
Population due to Natural Alone		428,745	445,552	467,380	489,505	511,379	531,076	551,145	
Implied Net Migration Demand		10,407	15,503	16,505	18,099	17,852	19,499	21,004	108,462

Source: Altus Economics

The required population growth to satisfy labour demand over the forecast period is much higher:

- An increase of about 100,427 people between the age of 15 and 84 is required to support the additional 73,500 people in the labour force, given existing and projected participation rates by age and sex;
- The overall participation ratio is likely to trend downward until 2026 and gradually increase thereafter.

The expected changes in participation ratios are mainly driven by the following four factors:

- The 2009 recession had a significant effect on the local economy, especially among young people. As a result, the participation rate of those aged under 25 years declined significantly over the 2006-2011 period. Experience suggests that youth participation rates tend to recover from such a recessionary event very slowly over time;
- Participation rates of women are expected to catch up with men's over the forecast period. Over the last several decades, women in younger age groups have increased their labour force participation to the similar levels as men, and as these women age into older cohorts, the overall participation rate for females are forecast to largely converge with males;
- Recent statistics and studies have shown that "baby boomers" are likely to stay at their jobs longer and continue to work after the age of 65 to a greater extent than previous generations. As a result, the participation ratios of older people will steady increase over the forecast period, mitigating, to a degree, the impending labour shortage problem; however
- The overall participation rate will still move modestly lower due to the aging of the population into their lower-participation years.

Figure 21 illustrates the projections for participation ratios by age and sex, based these four factors. The net effect is that population in Middlesex County is likely to increase by some 149,820 people in order to satisfy the projected labour force needs.

Figure 21

**Labour Force Characteristics by Age, Middlesex County, 2006-2041**

Males	2006	2011	2016	2021	2026	2031	2036	2041
<b>Participation Rate</b>								
	<i>Percent</i>							
15-19	53.0	47.0	46.0	46.0	46.0	47.0	47.5	47.5
20-24	82.3	76.3	75.3	75.3	76.3	77.3	77.3	79.3
25-34	90.6	88.6	87.6	87.6	87.6	88.6	88.6	89.3
35-44	90.0	88.5	88.5	88.5	88.5	89.5	89.5	90.5
45-54	86.7	85.7	85.7	85.7	85.7	86.7	87.7	88.7
55-64	70.8	69.8	69.8	71.1	72.3	73.3	73.6	74.3
65+	16.0	17.0	17.0	18.0	19.0	20.0	21.0	22.0
Total	71.9	68.9	67.4	66.6	65.9	65.9	66.4	67.5
<b>Labour Force</b>								
	<i>Persons</i>							
15-19	7,970	7,770	6,819	6,616	7,002	7,571	8,073	8,415
20-24	13,025	12,660	14,129	12,903	12,935	13,712	14,554	15,868
25-34	24,345	25,731	27,779	30,797	31,427	30,285	30,998	33,161
35-44	27,740	24,361	25,005	27,295	29,866	33,347	34,100	33,247
45-54	26,610	27,572	25,919	23,543	24,278	26,886	29,770	33,366
55-64	15,820	18,385	20,115	21,725	20,819	19,286	20,051	22,235
65+	3,925	4,744	5,711	7,166	8,781	10,423	11,471	12,339
Total	119,435	121,223	125,476	130,045	135,109	141,510	149,018	158,631
<b>Females</b>								
<b>Participation Rate</b>								
	<i>Percent</i>							
15-19	55.4	49.4	48.4	48.4	48.4	49.4	49.9	49.9
20-24	80.4	74.4	73.4	75.4	75.4	76.4	77.4	78.4
25-34	80.3	78.3	77.3	82.6	82.6	82.9	84.9	86.0
35-44	81.9	79.9	79.7	79.7	82.4	83.9	84.9	85.9
45-54	80.5	78.5	78.5	78.5	78.5	80.5	83.5	85.5
55-64	56.0	60.0	60.0	61.5	62.5	63.6	68.6	72.6
65+	6.2	9.2	9.2	10.4	11.4	13.3	16.2	17.4
Total	61.7	59.5	57.6	57.5	56.8	57.0	58.9	60.3
<b>Labour Force</b>								
	<i>Persons</i>							
15-19	8,175	7,833	7,265	7,046	7,500	7,997	8,540	8,890
20-24	13,075	11,976	12,801	12,543	12,336	13,174	13,979	15,035
25-34	22,255	24,060	24,957	27,622	28,155	27,364	28,700	30,572
35-44	26,105	22,920	23,764	26,495	28,893	30,460	31,486	31,202
45-54	26,795	27,053	24,630	22,389	23,304	26,731	29,250	31,055
55-64	13,500	17,359	19,485	20,731	19,262	17,890	20,132	23,874
65+	2,070	2,778	3,301	4,439	5,723	7,378	8,997	9,440
Total	111,975	113,978	116,204	121,265	125,172	130,996	141,084	150,069
Total Both Sexes	231,410	235,201	241,680	251,310	260,282	272,505	290,101	308,700

Source: Altus Economics; Historical: Census of Canada

Since natural growth of the Middlesex's population is expected to be relatively low, without net migration, population growth would be insufficient to satisfy the labour force needs (Figure 20). To support adequately local economic development, total net migration over the 2011-2041 period will have to be some 108,462 persons. The detailed net migration by source are presented in the following sections.

#### 4.5.3 Net Immigration Projections 2006-2041

Figure 22 shows the projections for immigration to Middlesex County in the context of the projections for Ontario and Canada:

- The impending shortage of labour supply, due to the aging of the domestic population, will increase the need for immigration to Canada,
- In recent years, the federal government's immigration targets have been around 250,000 new permanent residents annually. In 2012, the Government of Canada set its target just below 260,000 new immigrants;
- Over the long-term, this target is likely to increase, however, at a gradual pace – this report expects the target will increase to about 280,000 by the end of forecast period;
- Ontario's share of newcomers to Canada has been decreasing over the last decade, primarily due to the weak economic performance and tough competition from other provinces that have developed provincial nominee programs for immigration. Over the coming decades, Ontario could slowly regain some shares as it develops its own immigration program;
- Immigration to Middlesex County is influenced by local labour force needs. The number of immigrants coming to Middlesex is expected to gradually increase over the forecast period, to just less than 2,860 persons per year.



Figure 22

**Immigration, Canada, Ontario and Middlesex County, 1996-2041**

Census Periods		Canada	Ontario	Middlesex	Middlesex as a Percent of Ontario
		Average Annual Number of Persons			%
1996-2001	a	209,993	116,901	2,419	2.07
2001-2006	a	238,566	130,685	2,467	1.89
2006-2011	e	255,744	124,160	2,363	1.90
2011-2016	f	264,112	133,000	2,357	1.77
2016-2021	f	274,918	142,725	2,557	1.79
2021-2026	f	274,918	142,725	2,657	1.86
2026-2031	f	274,918	142,725	2,657	1.86
2031-2036	f	279,725	155,000	2,857	1.84
2036-2041	f	279,725	155,000	2,857	1.84

a: Final data

e: Final data and preliminary post-censal estimates

f: Forecasts by Altus Group Economic Consulting

Source: Altus Group Economic Consulting based on data from Statistics Canada

Each year, only a small number of Middlesex residents emigrate outside of Canada. This report expects it will stay constant over the forecast period (Figure 23).

Overall, the total number of net international migrants to Middlesex County will rise moderately through the forecast period in response to labour force demand in local economy and other factors.

Figure 23

**Emigration, Canada, Ontario and Middlesex County, 1996-2041**

Census Periods		Canada	Ontario	Middlesex	Middlesex as a Percent of Ontario
		Average Annual Number of Persons			%
1996-2001	a	57,506	25,288	822	3.25
2001-2006	a	40,888	18,840	702	3.73
2006-2011	e	41,680	20,000	702	3.51
2011-2016	f	34,430	17,000	702	4.13
2016-2021	f	41,680	20,000	702	3.51
2021-2026	f	41,680	20,000	702	3.51
2026-2031	f	41,680	20,000	702	3.51
2031-2036	f	41,680	20,000	702	3.51
2036-2041	f	41,680	20,000	702	3.51

a: Final data

e: Final data and preliminary post-censal estimates

f: Forecasts by Altus Group Economic Consulting

Source: Altus Group Economic Consulting based on data from Statistics Canada

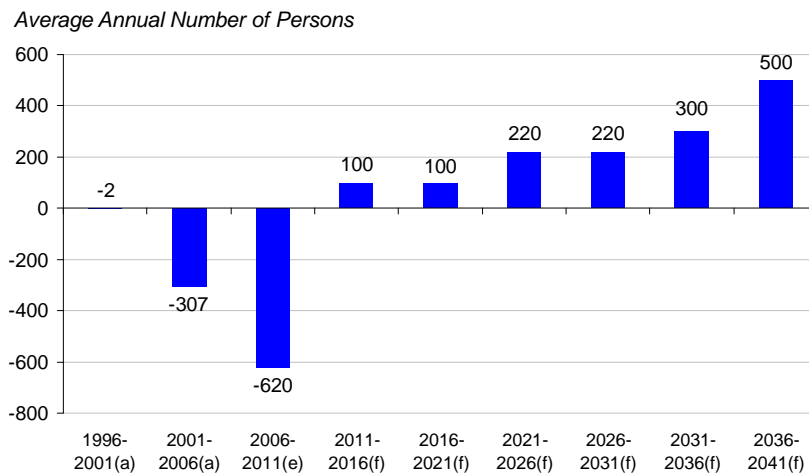
#### 4.5.4 Net Interprovincial Migration Projections 2006-2041

Figure 24 presents the historical and projected net interprovincial migration to Middlesex County:

- Over the last three census periods, the annual net interprovincial migration to Middlesex County has been negative;

Figure 24

#### Net Interprovincial Migration, Middlesex County 1996-2041



a: Final data; e: Final data and preliminary post-censal estimates by Statistics Canada;  
f: Forecasts by Altus Group Economic Consulting  
Source: Altus Group Economic Consulting based on data from Statistics Canada

- Especially, during the 2006-2011 period, some 620 Middlesex residents moved to other parts of the country each year; however
- Over the next several decades, this trend is expected to be reversed since brighter economic prospects will create enough incentives for local residents to stay and attract some migrants from the rest of Canada.

#### 4.5.5 Net Intraprovincial Migration Projections 2006-2041

There are three primary factors that influence the patterns of intraprovincial migration, including:

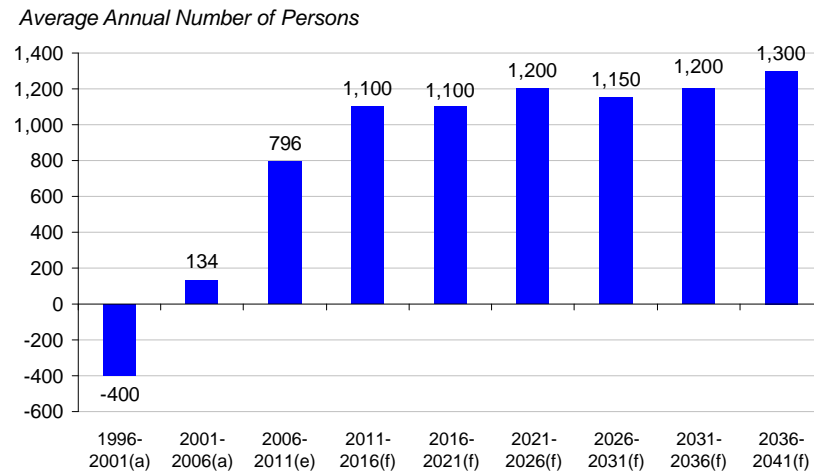
- Relative economic performance across the province;
- Lifestyle considerations; and
- Affordability within local housing markets.

Figure 25 illustrates the historical and projected net intraprovincial migration to Middlesex County:

- The county is estimated to attract some net 800 migrants from other parts of Ontario during the 2006-2011 period, despite a weak economic performance over the period. Thus, many people who moved to Middlesex might be seeking a better lifestyle and housing affordability;
- Over the coming decades, net intraprovincial migration to the county is expected to continue to rise, partially due to the increased labour force demand; and
- Lifestyle considerations will also have a positive impact on intraprovincial migration as many workers who left the county early may return to the area. This is especially true for people aged 55 and older, who tend to return to smaller communities from large centres for retirement.

Figure 25

### Net Intraprovincial Migration, Middlesex County 1996-2041



a: Final data; e: Final data and preliminary post-censal estimates by Statistics Canada;  
 f: Forecasts by Altus Group Economic Consulting  
 Source: Altus Group Economic Consulting based on data from Statistics Canada

## 4.6 POPULATION PROJECTIONS

### 4.6.1 Population Projections for Middlesex County 2006-2041

Projections of total population by age are presented in Figure 26. The historical population is reported from the Census of Canada, and projected population is presented on a Census population basis. No adjustments are made to account for potential Census undercount.

Total population for 2011 is based on the recent released 2011 Census data. However, the detailed population by age group for 2011 is based on estimates from the demographic model.

### 4.6.2 Methodology for City of London's Population Projection

Population projections for the City of London are based on a share allocation model by age and sex in Middlesex County over the forecast period. From past Census data, historical shares of the City of London's population by age and sex in Middlesex County are calculated and used as the base to estimate shares of the city's population in the county over the forecast period.

Projected population is based on these future share capture assumptions.

Figure 26

**Population by Age Group, Middlesex County, 1996-2041**

Age Groups	Census				Projections					
	1996	2001	2006	2011	2016	2021	2026	2031	2036	2041
	<i>Number of Persons</i>									
0-4	27,210	23,160	22,375	24,115	25,300	26,900	27,800	28,100	28,500	29,400
5-9	27,365	27,585	24,000	23,420	24,000	25,600	27,100	28,100	28,400	28,700
10-14	26,865	28,030	28,520	25,270	24,000	25,400	27,100	28,600	29,700	30,100
15-19	25,140	27,800	29,800	30,435	29,800	28,900	30,700	32,300	34,100	35,500
20-24	27,910	29,375	32,090	32,930	36,200	33,800	33,300	35,000	36,900	39,200
25-29	29,170	26,370	28,145	30,240	31,900	35,600	33,100	32,800	34,600	36,500
30-34	34,140	27,975	26,465	27,315	32,100	33,100	36,800	34,400	34,200	36,200
35-39	33,335	33,500	28,480	26,830	29,500	32,900	34,000	37,800	35,500	35,400
40-44	30,305	33,210	34,205	29,280	28,600	31,100	34,800	35,800	39,700	37,700
45-49	27,455	30,195	33,905	34,715	28,500	27,900	30,400	34,100	35,100	38,900
50-54	20,655	27,040	30,065	33,965	33,100	28,100	27,600	30,100	33,900	35,000
55-59	16,680	20,275	26,660	29,470	32,400	32,600	27,700	27,300	29,800	33,500
60-64	15,040	16,095	19,805	25,970	28,900	31,700	31,900	27,200	26,800	29,400
65-69	14,300	14,475	15,550	19,275	24,800	27,900	30,700	31,000	26,500	26,300
70-74	13,415	13,380	13,555	14,725	18,000	23,600	26,600	29,200	29,600	25,700
75-79	9,545	11,710	11,860	12,130	13,200	16,200	21,200	24,000	26,500	27,000
80-84	6,255	7,315	9,475	9,595	9,600	10,600	13,100	17,300	19,700	22,000
85+	5,175	5,690	7,375	9,475	11,200	12,100	13,500	16,200	21,000	25,700
Total	389,960	403,180	422,330	439,200	461,100	483,900	507,600	529,200	550,600	572,100

Totals may not add due to rounding

Source: Altus Economics

#### 4.6.3 City of London's Population Projections 2006-2041

Over the last two decades, the share of London's population as a percentage of Middlesex's has been relatively stable (Figure 27):

- Between 1996, 2001 and 2006, London's share of Middlesex's population stabilized at around 83.5%;
- The share remained at this ratio, based on the recently released 2011 Census data;
- Moving forward, this ratio is expected to slightly increase over the forecast period, to 84.1% by the end of the forecast period.

Various factors are behind this marginal increase of London's share, including:

- The City of London represents both the urban core and the suburban zone of Middlesex County, and the remaining eight municipalities of the county represent the rural periphery. Generally, the suburban zone is the highest growth area in a county as there are more residential development opportunities to support growth, the distances to established employment areas are reasonable, and access to centrally located services (including hospitals, schools, etc.) are convenient. As a result, the expected faster growth within London's suburbs will marginally push up its share of the county's population; and
- The City of London is promoting infill developments within existing neighbourhoods and a revitalization of the downtown core. These initiatives will also help to increase London's share of the county's population.

The resulting population projections for City of London over the forecast period are presented in Figure 28.

Figure 27

**Population of City of London as A Percent of Middlesex County, 1996-2041**

Age Groups	Census				Projections					
	1996	2001	2006	2011	2016	2021	2026	2031	2036	2041
	<i>Percent</i>									
0-4	83.3	83.1	82.6	84.0	82.6	82.7	82.8	82.9	83.0	83.1
5-9	81.3	80.9	81.4	83.9	81.4	81.5	81.6	81.7	81.8	81.9
10-14	80.7	80.6	80.0	81.4	80.1	80.2	80.3	80.4	80.5	80.6
15-19	81.6	81.7	81.9	76.3	81.9	82.0	82.1	82.2	82.3	82.4
20-24	87.8	88.1	87.9	88.5	87.8	87.9	88.0	88.1	88.2	88.3
25-29	88.6	88.6	89.1	86.9	89.1	89.2	89.3	89.4	89.5	89.6
30-34	85.8	85.9	86.0	82.9	86.0	86.1	86.2	86.3	86.4	86.5
35-39	83.1	83.5	83.6	83.5	83.6	83.7	83.8	83.9	84.0	84.1
40-44	83.1	82.5	82.5	82.9	82.5	82.6	82.7	82.8	82.9	83.0
45-49	82.7	82.8	82.2	84.7	82.2	82.3	82.4	82.5	82.5	82.6
50-54	81.7	82.5	82.8	84.3	82.8	82.9	83.0	83.1	83.2	83.2
55-59	81.7	81.5	82.2	81.9	82.2	82.3	82.4	82.5	82.6	82.7
60-64	82.1	81.6	81.2	82.8	81.2	81.3	81.4	81.5	81.6	81.7
65-69	83.3	82.6	81.8	82.6	81.8	81.9	82.0	82.0	82.1	82.2
70-74	84.6	83.8	83.2	81.3	83.2	83.3	83.4	83.5	83.6	83.7
75-79	83.4	85.4	84.5	83.8	84.5	84.6	84.7	84.8	84.9	85.0
80-84	84.0	84.1	86.0	86.5	86.0	86.1	86.2	86.3	86.4	86.5
85+	77.3	82.9	84.0	82.2	84.0	84.1	84.2	84.3	84.4	84.5
Total	83.5	83.5	83.4	83.4	83.5	83.6	83.7	83.8	83.9	84.1

Source: Altus Economics

Figure 28

**Population by Age Group, City of London, 1996-2041**

Age Groups	Census				Projections					
	1996	2001	2006	2011	2016	2021	2026	2031	2036	2041
	<i>Number of Persons</i>									
0-4	22,665	19,235	18,475	19,990	20,900	22,200	23,000	23,300	23,600	24,400
5-9	22,245	22,330	19,540	19,005	19,500	20,900	22,100	23,000	23,200	23,500
10-14	21,670	22,600	22,830	20,365	19,200	20,400	21,800	23,000	23,900	24,300
15-19	20,525	22,720	24,405	24,715	24,400	23,700	25,200	26,600	28,100	29,300
20-24	24,515	25,880	28,195	28,920	31,800	29,700	29,300	30,800	32,600	34,600
25-29	25,850	23,360	25,070	26,990	28,400	31,700	29,600	29,300	30,900	32,700
30-34	29,285	24,025	22,755	23,835	27,600	28,500	31,800	29,700	29,600	31,300
35-39	27,685	27,975	23,805	22,530	24,700	27,600	28,500	31,700	29,800	29,700
40-44	25,175	27,390	28,210	24,235	23,600	25,700	28,800	29,600	32,900	31,300
45-49	22,710	25,015	27,860	28,495	23,400	22,900	25,000	28,100	29,000	32,200
50-54	16,865	22,295	24,890	27,835	27,400	23,300	22,900	25,000	28,200	29,100
55-59	13,620	16,530	21,915	24,265	26,700	26,800	22,800	22,500	24,600	27,700
60-64	12,345	13,140	16,080	21,255	23,500	25,800	26,000	22,200	21,900	24,000
65-69	11,910	11,955	12,715	15,540	20,300	22,800	25,100	25,400	21,800	21,600
70-74	11,355	11,215	11,280	11,950	15,000	19,600	22,200	24,400	24,800	21,500
75-79	7,965	9,995	10,025	10,070	11,200	13,700	18,000	20,400	22,500	23,000
80-84	5,255	6,155	8,150	8,030	8,200	9,100	11,300	14,900	17,000	19,000
85+	4,000	4,715	6,195	8,115	9,400	10,200	11,400	13,700	17,700	21,700
Total	325,640	336,530	352,395	366,140	385,100	404,600	424,800	443,500	462,100	480,900

Totals may not add due to rounding

Source: Altus Economics

## 5 HOUSING DEMAND

This chapter presents projections for housing demand based on the population forecast from Chapter 4 and the Altus Group's housing demand model.

### 5.1 METHODOLOGY

The process to estimate housing demand over the forecast period works as the following:

- First, this housing demand forecast model is based primarily on the population projections prepared in Chapter 4;
- Age-specific propensities are used to project the number of family and non-family households and are applied to obtain projections of family, non-family and total family households by age group (age of the household head);
- The family projections are then disaggregated further into couples with children at home, couples without children at home, lone-parent and multi-family households;
- These detailed family type projections are used to help project housing demand by dwelling type in six categories based on a relationship between family type and dwelling type – single-detached, semi-detached, row, high-rise apartment, low-rise apartment and all other;
- From a planning perspective, an estimate of potential development needs via three density categories is preferred. Altus Economics reorganizes the results of the housing demand model into three broad categories - low density (single-detached and semi-detached), medium density (row housing) and high density (apartments and other); and
- Finally, incremental housing needs are assessed based on the resulting underlying household demand, and an assessment of supply factors, which might also influence the mix, quality and location of new housing likely to be provided over the projection period.

## 5.2 HEADSHIP RATES

Headship rates have the largest impact on the projections of household needs. Headship rates measure the proportion of the population in a specific age-cohort which are household heads. In general, headship rates are relatively low among the 15-19 year old cohort and then rise rapidly through the 20s and 30s. Headship rates continue to rise through the older age groups, but at a more modest rate.

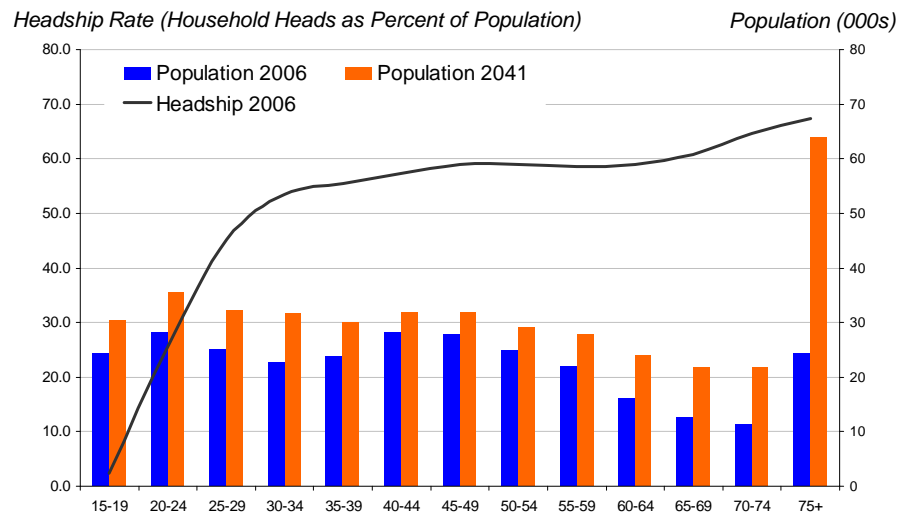
Figure 29 illustrates the headship rates for the City of London by age cohort in 2006. The model employed in this report holds these rates relatively stable for each age cohort through the forecast period.

The population forecast for London anticipates an increase in population for all adult age cohorts. However, the largest increase in population will be found among population aged 55 and above, who also have the higher headship rates.

As a result household growth in London over the projection period is both a function of overall population growth, and the “leveraged growth” from the aging of the population. That is, the pace of household formation will be boosted as the population ages into its higher household formation years.

Figure 29

### Headship Rates and Population, City of London 2006-2041



Source: Altus Group Economic Consulting based on data from Statistics Canada



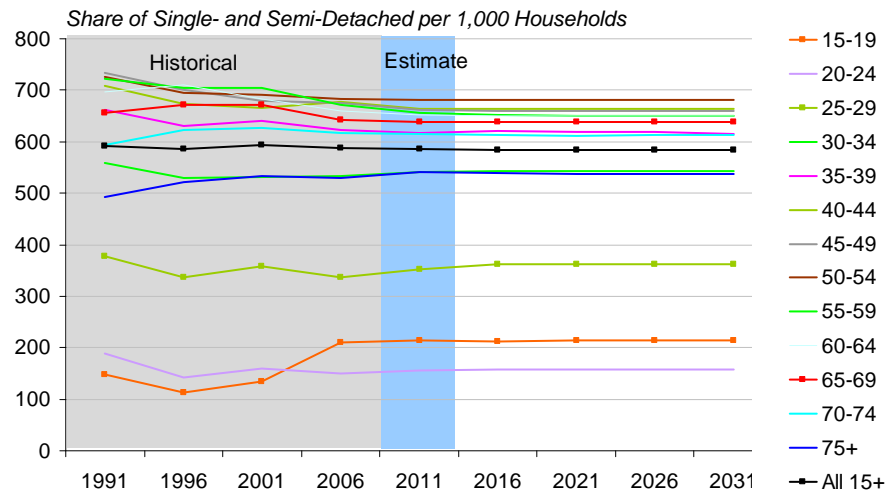
### 5.3 TRENDS IN PROPENSITIES BY STRUCTURE TYPE

Age-specific propensities measure the share of occupied dwellings by structure type within each age group. Generally speaking, propensities for apartment and row housing are highest among younger age groups and propensities for singles and semis are highest among older working-age age groups. This section presents historical and forecasted trends in propensities by structure type and by age group.

- Over the last 20 years, the total propensity for single- and semi-detached has been relatively stable for most age groups – with the primary trends being a modest rise for the age group 15-19 years and a corresponding modest decline among the 55-59 year group (Figure 33);

Figure 30

#### Household Propensities by Age Group for Single- and Semi-Detached, Middlesex County, 1996-2031



Source: Altus Group Economic Consulting based on data from Census of Canada

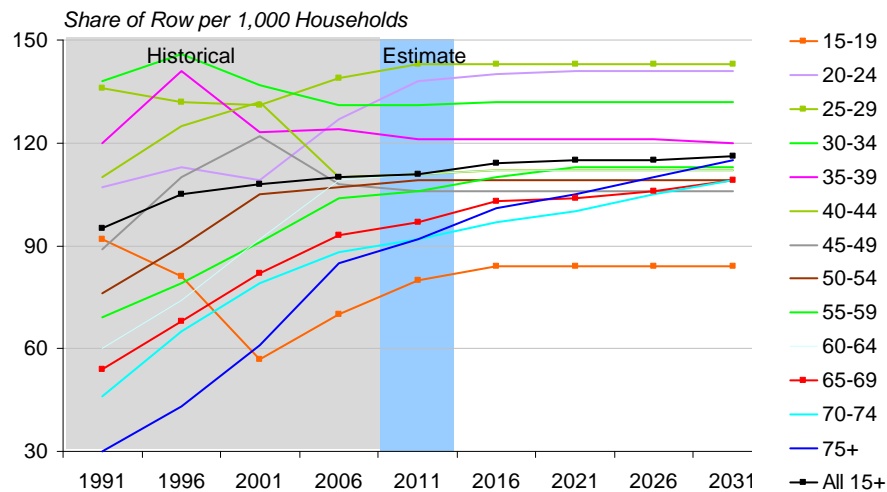
- Propensity trends for row units have shown less stability historically in Middlesex and specific factors are taken into account for future changes in row propensities (Figure 31).. Over the period 1991 to 2006:
  - Some age group have seen a steady upward trend in terms of their propensities to live in row or townhouse style housing. The 30-34 group and the 50-54 age group (and all older age

groups) are examples and are illustrated in the figure. In keeping with the historical trend, modest increases in the propensity to choose a row or townhouse unit is built into the forecast;

- Some groups have seen a less pronounced trend in the past. For example the 40-44 age group showed an upward trend in row propensities between 1991 and 2001 which was reversed in the 2001-2006 period. The 45-49 and 35-39 age groups showed similar patterns. The forecast for these groups is based on holding propensities mostly constant over the forecast period.

Figure 31

### Household Propensities by Age Group for Row Middlesex County, 1996-2031

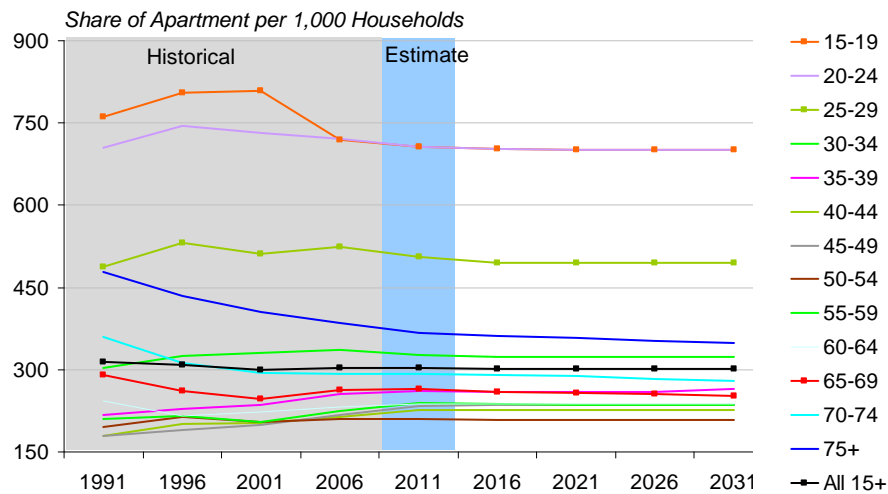


Source: Altus Group Economic Consulting based on data from Census of Canada

- During recent years, apartments have become more popular among population aged under 60 years old, while propensities for population aged 60 years and older have declined (Figure 32). A modest further decline in older age groups is expected. The increased longevity of the population and the effect this is expected to have in terms of increased “ageing in place” is a factor in this forecast; and

Figure 32

### Household Propensities by Age Group for Apartment Middlesex County, 1996-2031



Source: Altus Group Economic Consulting based on data from Census of Canada

- Although these illustrations and explanations discuss propensity trends at an aggregated level (e.g., one propensity for all persons in a certain age group), the Altus Economics Housing Demand model works on the basis of propensities by detailed demographic, including age (13 groups), household type (5 groups), and tenure (owner, renter) across six detailed structure types. Thus in all the model considers some 780 individual propensities in assessing the significance of past trends and the requirements for the building in of future trends for the forecast. The vast majority of the detailed propensities have not been adjusted – i.e., have been assumed to remain at their 2006 levels.

## 5.4 HOUSEHOLD GROWTH BY STRUCTURE TYPE

Housing structural type is broken down here into three categories: single- and semi-detached (low density), row (medium density), and apartments and other (high density), to match the categories required in other planning documents from the City. Household growth is then projected over the period 2011-2041.

Figure 33 illustrates the estimated household growth by structure type for City of London over the next three decades. During the last decade, there have been some notable trends in London's housing market that will affect the future household formation:

- Based on the housing completion data and other housing statistics from Canadian Mortgage and Housing Corporation (CMHC), the share of "row"<sup>44</sup> households of the city's total household growth is estimated to decline to 12% from 18% during the 2001-2006 census period. Its lost shares were captured by single- and semi-detached homes (Figure 33);
- The surge in single- and semi-detached households growth might be due to a delayed demand from the previous census period – during the 2001-2006 census period, single- and semi-detached households only captured 40% of the total household growth, dramatically lower than the 68% during the 1996-2001 census. The increase in the share of single- and semi-detached households is a normal recovery from a steep drop. Moving forward, the share of single- and semi-detached households is projected to stabilize around 50%;
- The share of apartment households is expected to marginally decline to 39% during the 2006-2011 census period, however, still significantly higher than the share during the 1996-2001 census period. The strong growth in apartment households is partially due to the increase in rental households, who normally reside in apartments; and
- Over the coming decades, apartment households will continue to experience strong growth as the recent trend towards rental

<sup>44</sup> CMHC defines a "row (townhouse)" dwelling as a one family dwelling unit in a row of three or more attached dwellings separated by a common or party wall extending from ground to roof.

households continues and the City continues its efforts to revitalize the downtown area.

In total, the city is expected to add some 48,900 net new households over the 2011-2041 period, of which just over half will be single- and semi-detached households, about 33% will be apartment households and the rest will be rows households.

Figure 33

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**Annual Household Growth, City of London, 1996-2041**

Census Periods		Single and Semis	Row	Apartments and Other	Total
		<i>Occupied Dwelling Units</i>			
1996-2001	a	1,089	264	252	1,605
2001-2006	a	622	274	654	1,550
2006-2011	e	789	266	574	1,629
2011-2016	f	916	318	690	1,924
2016-2021	f	1,075	356	705	2,136
2021-2026	f	1,050	329	644	2,023
2026-2031	f	989	291	604	1,884
2031-2036	f	938	259	511	1,708
2036-2041	f	889	263	596	1,748
<b>2011-2041</b>					
	Avg. Annual	835	260	535	1,630
	Total	25,050	7,800	16,050	48,900
Census Periods		<i>Percent Distribution</i>			
1996-2001	a	68	16	16	100
2001-2006	a	40	18	42	100
2006-2011	e	48	16	35	100
2011-2016	f	48	17	36	100
2016-2021	f	50	17	33	100
2021-2026	f	52	16	32	100
2026-2031	f	53	15	32	100
2031-2036	f	55	15	30	100
2036-2041	f	51	15	34	100
2011-2041		51	16	33	100

Totals may not add due to rounding

a: Final Census of Canada data

e: Estimates based on actual CMHC completions data

f: Forecasts by Altus Group Economic Consulting

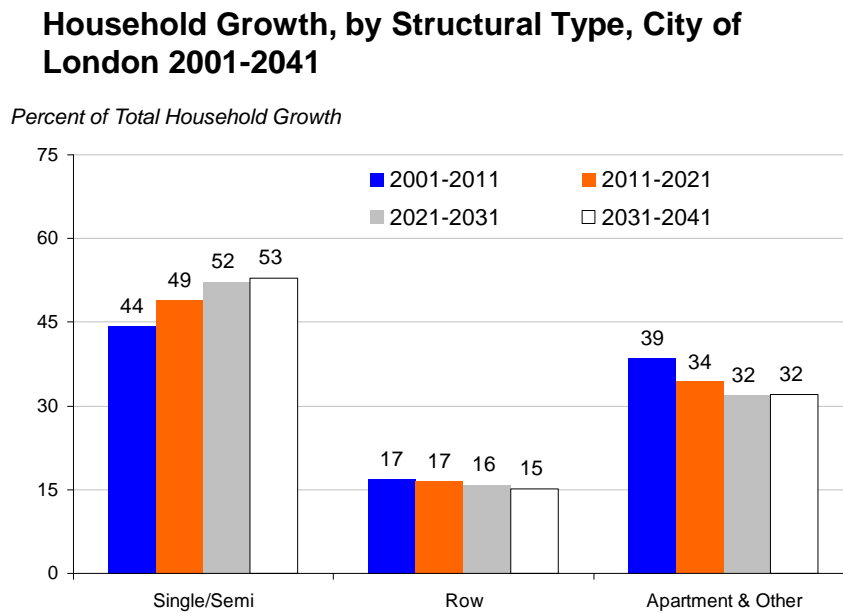
Source: Altus Group Economic Consulting based on data from CMHC and Census of Canada

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Figure 34 shows that single- and semi-detached households' share of the total household growth in London will gradually increase through the 2021-2031 period until a modest increase in the shares of row and apartment households is expected to stop its upward trend.

Accounting for replacement demand (and some change of vacancy in the current period), the expectation is for demand for the construction of some 61,050 new dwellings (Figure 30).

Figure 34



Source: Altus Economics

Figure 35

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**Annual Housing Completions, City of London, 2006-2041**


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Census Periods	Single and	Row	Apartments	Total
	Semis		and Other	
<i>Occupied Dwelling Units</i>				
2006-2011	1,115	226	793	2,134
2011-2016	<i>f</i> 1,001	340	716	2,057
2016-2021	<i>f</i> 1,170	379	705	2,254
2021-2026	<i>f</i> 1,151	354	644	2,149
2026-2031	<i>f</i> 1,096	318	604	2,018
2031-2036	<i>f</i> 1,049	288	511	1,848
2036-2041	<i>f</i> 1,006	293	596	1,895
<b>2011-2041</b>				
Avg. Annual	1,080	330	630	2,035
Total	32,400	9,900	18,900	61,050
<i>Percent Distribution</i>				
2006-2011	52	11	37	100
2011-2016	49	17	35	100
2016-2021	52	17	31	100
2021-2026	54	16	30	100
2026-2031	54	16	30	100
2031-2036	57	16	28	100
2036-2041	53	15	31	100
2011-2041	52	15	33	100

Totals may not add due to rounding

Source: (f) forecasts by Altus Economics

## 5.5 CITY OF LONDON POPULATION DISTRIBUTION BY PERIOD OF CONSTRUCTION

This section presents estimates of projected population in the City of London in new development areas.

Population in new dwellings completed between 2011 and 2041 is projected to be 165,050 persons. Total population growth in the City of London during that period is only 107,200 persons. Therefore, population in presently-developed areas is expected to decline through the projection period.

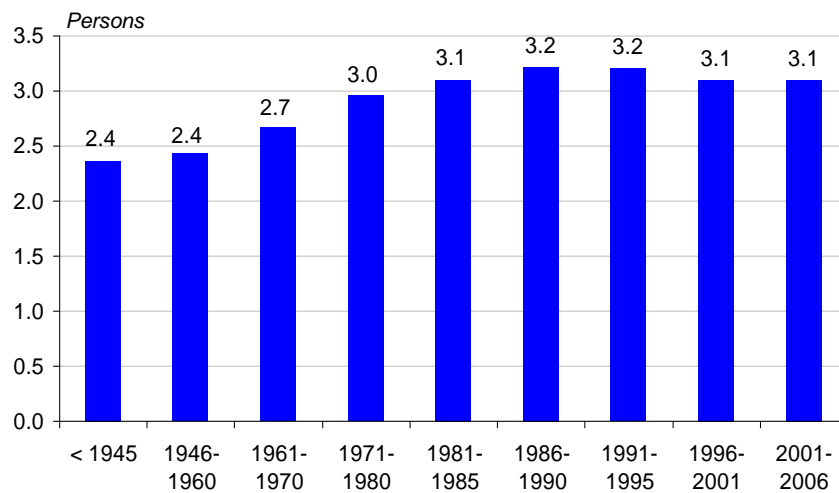
Projections of the numbers of persons per unit, based on the age of dwellings, is used to generate this population distribution. Key factors include:

- In 2006 there was a strong relationship between the age of dwellings and the number of persons in each one (Figure 30). This relationship relates to the traditional lifecycle of dwellings where average household sizes

rise for the first several years of a dwelling's existence (the influence of young and growing families in newer dwellings/neighbourhoods) then falls off as dwellings reach 20 to 40 years old, then stabilizes thereafter as neighbourhoods begin to attract a second generation of younger growing families.

Figure 36

**Persons Per Unit by Period of Construction, Low-Density Dwellings, City of London, 2006**



Source: Altus Group Economic Consulting based on data from Census of Canada

- This pattern applies to low and medium density housing, but does not hold for high density housing, where, in 2006 the persons per unit was about 1.7 for all ages of dwellings (as it had been in 2001).
- At the same time, there has been a trend toward smaller households in the City of London in recent periods. For example, the average persons per unit in new (less than 10 years old) low density units in 1991 was 3.43; in 1996 3.40; in 2001 3.27 persons and in 2006 3.1 persons.
- The recent structural decline in persons per unit for new housing is related to the structural decline in the total fertility rate through to the early 2000, as discussed in Section 4.2.2. The effects of the stabilizing and improving fertility rate will likely stabilize this decline in PPU for new dwellings in the future. To be consistent with the forecast for the TFR,



the PPU for new housing is projected to continue to decline through to 2011 then to stabilize thereafter.

Thereafter, number persons per unit are modelled based on the historical pattern over the lifecycle of the dwelling.

Population projected to be supported by new construction is presented in a series of figures on subsequent pages. As a guide to reading these figures, consider:

- Figure 32 presents the projected total number of new dwelling units by structure type and period of construction in the City of London over the period 2011-2011.
- Figure 33 to Figure 36 present a summary of new dwellings, population and average PPU by dwelling structure type for the years 2011, 2021, 2031 and 2041 respectively.

Figure 37

### Projections of Population in New Dwellings City of London, 2006-2041

Period of Construction	New Dwellings by Housing Structure Type					
	Total	Low	Med	High	High by Unit Type	
					<2 Bed	2+ Bed
2001-2006	9,035	6,372	1,301	1,362	545	817
2006-2011	10,360	5,395	1,091	3,874	1,549	2,324
2011-2016	10,102	4,872	1,653	3,578	1,431	2,147
2016-2021	11,103	5,723	1,856	3,525	1,410	2,115
2021-2026	10,620	5,658	1,743	3,218	1,287	1,931
2026-2031	10,011	5,419	1,573	3,019	1,207	1,811
2031-2036	9,204	5,218	1,430	2,556	1,022	1,534
2036-2041	9,477	5,029	1,466	2,982	1,193	1,789

#### Population in New Dwellings, 2011

Period of Construction	Housing Structure Type					
	Total	Low	Med	High	High by Unit Type	
					<2 Bed	2+ Bed
2006-2011	26,871	17,281	2,524	7,066	2,336	4,730

#### Population in New Dwellings, 2021

Period of Construction	Housing Structure Type					
	Total	Low	Med	High	High by Unit Type	
					<2 Bed	2+ Bed
2006-2011	26,628	17,421	2,694	6,513	2,336	4,730
2011-2016	24,599	15,215	3,465	5,919	1,773	3,944
2016-2021	28,313	17,854	4,181	6,279	2,023	3,905

#### Population in New Dwellings, 2031

Period of Construction	Housing Structure Type					
	Total	Low	Med	High	High by Unit Type	
					<2 Bed	2+ Bed
2006-2011	25,976	16,243	2,937	6,795	2,336	4,730
2011-2016	25,109	15,251	3,967	5,891	1,773	3,944
2016-2021	28,169	17,823	4,420	5,926	2,023	3,905
2021-2026	25,894	17,045	3,524	5,325	1,773	3,475
2026-2031	25,103	16,308	3,418	5,377	1,787	3,569

#### Population in New Dwellings, 2041

Period of Construction	Housing Structure Type					
	Total	Low	Med	High	High by Unit Type	
					<2 Bed	2+ Bed
2006-2011	22,774	13,628	2,765	6,381	2,336	4,730
2011-2016	23,886	13,631	4,030	6,225	1,773	3,944
2016-2021	27,833	16,783	4,866	6,183	2,023	3,905
2021-2026	26,630	17,255	4,074	5,300	1,773	3,475
2026-2031	25,166	16,442	3,650	5,075	1,787	3,569
2031-2036	22,359	15,313	2,817	4,229	1,372	3,092
2036-2041	23,155	14,741	3,102	5,312	1,636	3,290

Source: Altus Group Economic Consulting

Figure 38

**Summary of Population by Dwelling Structure Type and Period of Construction, City of London, 2011**

	Housing Structure Type				High by Unit Type	
	Total	Low	Med	High	<2 Bed	2+ Bed
<b>Population in Households</b>						
In Post-2006 Dwellings	26,871	17,281	2,524	7,066	2,336	4,730
In Pre-2006 Dwellings	335,085	203,917	48,588	82,580	n/a	n/a
Total	360,764	221,198	51,112	89,646	n/a	n/a
<b>Dwellings</b>						
Post-2006 Dwellings	10,671	5,576	1,128	3,967	1,549	2,324
Pre-2006 Dwellings	143,004	76,217	18,574	48,213	19,285	28,928
Total	153,675	81,793	19,702	52,180	20,835	31,252
<b>Persons Per Unit (PPUs)</b>						
In Post-2006 Dwellings	2.52	3.10	2.24	1.78	1.51	2.04
In Pre-2006 Dwellings	2.34	2.68	2.62	1.71	n/a	n/a
Total	2.35	2.70	2.59	1.72	n/a	n/a

Source: Altus Group Economic Consulting

DRAFT DOCUMENT - FOR DISCUSSION PURPOSES

Figure 39

**Period of Construction, City of London, 2021**

	Housing Structure Type				High by Unit Type	
	Total	Low	Med	High	<2 Bed	2+ Bed
<b>Population in Households</b>						
In Post-2006 Dwellings	79,541	50,490	10,340	18,711	6,132	12,579
In Pre-2006 Dwellings	320,650	188,961	47,562	84,127	n/a	n/a
Total	397,931	239,451	57,902	102,838	n/a	n/a
<b>Dwellings</b>						
Post-2006 Dwellings	32,024	16,345	4,702	10,976	4,390	6,586
Pre-2006 Dwellings	141,934	75,383	18,370	48,180	19,272	28,908
Total	173,957	91,728	23,073	59,157	23,663	35,494
<b>Persons Per Unit (PPUs)</b>						
In Post-2006 Dwellings	2.48	3.09	2.20	1.70	1.40	1.91
In Pre-2006 Dwellings	2.26	2.51	2.59	1.75	n/a	n/a
Total	2.29	2.61	2.51	1.74	n/a	n/a

Source: Altus Group Economic Consulting

Figure 40

	Period of Construction, City of London, 2031					
	Housing Structure Type				High by Unit Type	
	Total	Low	Med	High	<2 Bed	2+ Bed
<u>Population in Households</u>						
In Post-2006 Dwellings	130,251	82,670	18,266	29,315	9,692	19,623
In Pre-2006 Dwellings	306,821	176,518	45,547	84,755	n/a	n/a
Total	433,583	259,188	63,814	114,070	n/a	n/a
<u>Dwellings</u>						
Post-2006 Dwellings	52,584	27,367	8,004	17,213	6,885	10,328
Pre-2006 Dwellings	140,907	74,558	18,169	48,180	19,272	28,908
Total	193,491	101,924	26,173	65,394	26,157	39,236
<u>Persons Per Unit (PPUs)</u>						
In Post-2006 Dwellings	2.48	3.02	2.28	1.70	1.41	1.90
In Pre-2006 Dwellings	2.18	2.37	2.51	1.76	n/a	n/a
Total	2.24	2.54	2.44	1.74	n/a	n/a

Source: Altus Group Economic Consulting

Figure 41

	Period of Construction, City of London, 2041					
	Housing Structure Type				High by Unit Type	
	Total	Low	Med	High	<2 Bed	2+ Bed
<u>Population in Households</u>						
In Post-2006 Dwellings	171,802	107,792	25,305	38,705	12,701	26,005
In Pre-2006 Dwellings	298,981	169,881	44,111	84,990	n/a	n/a
Total	467,994	277,673	69,416	123,695	n/a	n/a
<u>Dwellings</u>						
Post-2006 Dwellings	70,878	37,315	10,812	22,751	9,101	13,651
Pre-2006 Dwellings	139,892	73,741	17,970	48,180	19,272	28,908
Total	210,770	111,056	28,782	70,932	28,373	42,559
<u>Persons Per Unit (PPUs)</u>						
In Post-2006 Dwellings	2.42	2.89	2.34	1.70	1.40	1.91
In Pre-2006 Dwellings	2.14	2.30	2.45	1.76	n/a	n/a
Total	2.22	2.50	2.41	1.74	n/a	n/a

Source: Altus Group Economic Consulting

## 5.6 POPULATION BY CATEGORY

Statistics Canada prepares population estimates for Canada, provinces, census divisions, subdivisions and metropolitan areas that start with census population counts and then, based on post-census sampling, accounts for estimates of 1) persons unintentionally missed from the census on census day and 2) persons unintentionally double counted by the census.

Taken together, the two error estimates are said to be the net census undercount.

In 2006, the census count for population in the city of London was 352,395 persons and the post-censal estimate by Statistics Canada for that year was 366,328 based on a net undercount of some 13,933 persons, or 3.8% of the population.

The standard methodology for estimating and projecting population is to adopt the undercount rate for the most recent census and to hold the undercount assumption going forward constant at the rate from the most recent census and post-censal estimate.

Figure 42

### Projections of Population by Category, City of London

Census Years	Census Population			Adjustment for Net Undercount		
	Population in Households	Institutional Population	Total	Net U/C Rate	Net Undercount	Total Population
	<i>Persons</i>			<i>%</i>	<i>Persons</i>	
2001	332,415	4,115	336,530	4.45	15,669	352,199
2006	347,460	4,935	352,395	3.80	13,933	366,328
2011	360,764	5,291	366,055	3.80	14,474	380,529
2016	379,243	5,826	385,069	3.80	15,225	400,294
2021	397,931	6,682	404,613	3.80	15,998	420,611
2026	416,590	8,227	424,816	3.80	16,797	441,613
2031	433,583	9,914	443,497	3.80	17,535	461,032
2036	450,498	11,597	462,095	3.80	18,271	480,366
2041	467,994	12,903	480,897	3.80	19,014	499,911
<b>Annual Growth</b>						
2001-11	2,835	118	2,953			2,833
2011-21	3,178	89	3,267			3,397
2021-31	3,717	139	3,856			4,008
2031-41	3,735	240	3,975			4,132
2011-41	3,574	254	3,828			3,979
Altus Economics						

With all this in mind, the population of London has the following characteristics:

- In 2006, the census population count is 352,400 persons composed of 357,460 in households and the remainder institutional;
- Based on a net undercount rate of 3.8%, there is said to be some 13,933 additional persons in London in 2006 for a total estimated population of 366,328;
- The recently-released total census population counts for 2011 of 366,152 is assumed to be composed of 360,807 persons in households and 5,345 persons in institutions. The institutional population estimates are based on holding the institutional population at 20.25% of population 75+ -- as it was in 2006;
- Based on the 2011 census counts and a 3.8% net undercount rate, the total population estimate for 2011 is said to be 380,630 persons; and
- The projected growth in the total estimated population is said to be 3,976 persons per year.

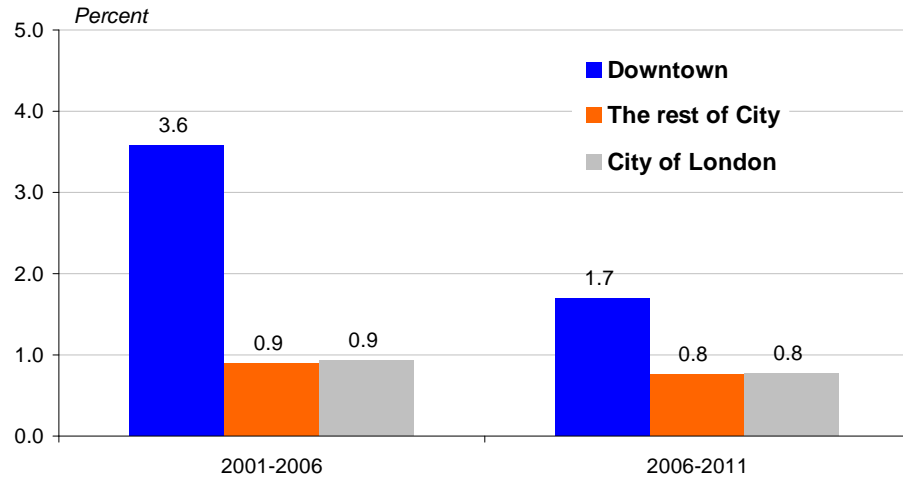
## 5.7 URBANIZATION

Over the last several years, there has been a “re-urbanization” in some large Canadian urban centers. City of London had a similar experience. The city’s downtown area has seen relatively strong population growth over the last decade:

- Data from Census show that the downtown area’s population growth was significantly higher than the rest of the City of London - downtown population grew at an average annual rate of 3.6% during the 2001-2006 period, four times of the city’s average (Figure 49); and
- This trend continues during the most recent census, in which London’s downtown population increased 1.7% each year, although lower than the previous census, was still twice the city’s overall pace.

Figure 43

### Average Annual Population Growth, City of London 2001-2011



Source: Altus Group Economic Consulting based on data from Census of Canada

This re-urbanization is partially driven by the growth in apartment households. Apartments are a preferred choice of housing among some segments of younger adults:

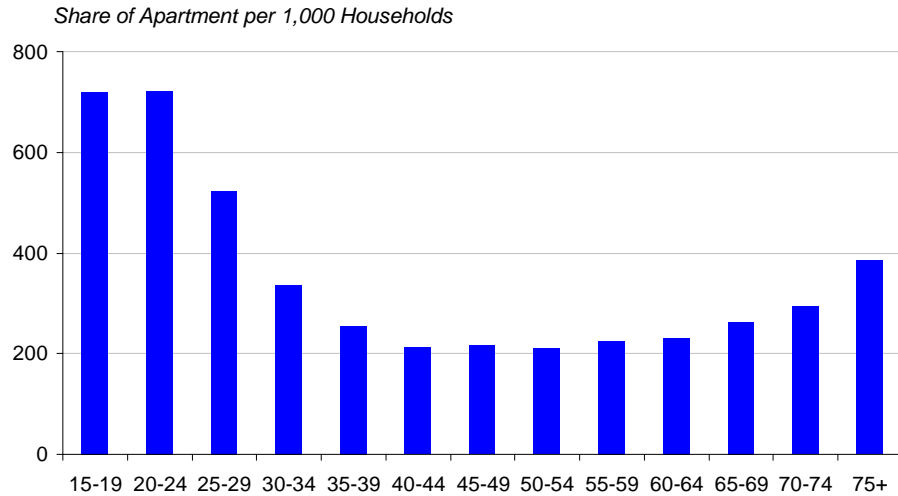
- The 2006 Census shows that apartment propensities are the highest among population younger than 30 years old (Figure 46);
- The propensity gradually declines in each age group until age 55-54; and
- Apartment propensities for people aged 75 and older also rises modestly.

Figure 45 illustrates historical and forecasted net migration by selected age group for Middlesex County:

- Population aged between 15-29 years old is expected to represent the largest share of net migration younger than 45 years old,
- Because this age group has the highest apartment propensities, the large number of new young immigrants will help to boost the apartment households over the next two decades; and
- The growth in apartment households will sustain the re-urbanization trends.

Figure 44

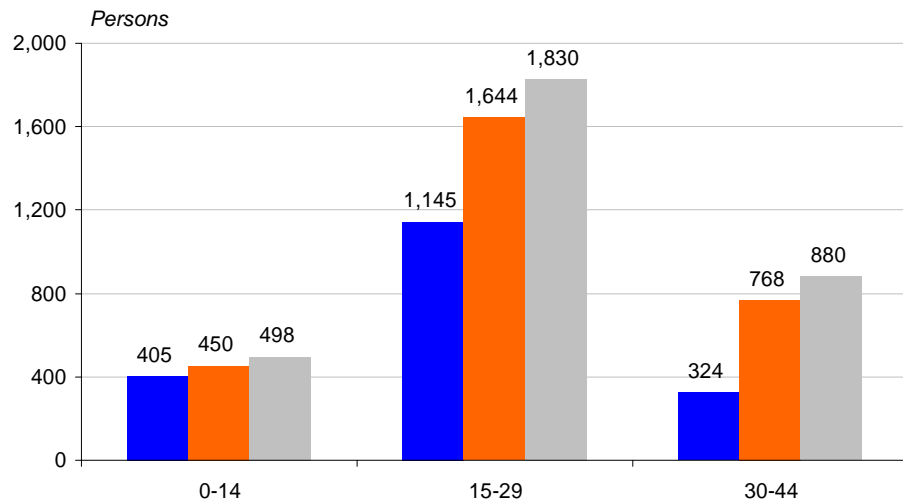
### Household Propensities by Age Group for Apartment Middlesex County, 2006



Source: Altus Group Economic Consulting based on data from Census of Canada

Figure 45

### Average Annual Net Migration by Selected Age Group for Middlesex County, 2001-2031



Source: Altus Group Economic Consulting based on data from Census of Canada



## 6 NON-RESIDENTIAL SPACE DEMAND

This section outlines non-residential space demand projections for the City of London based on employment forecasts and recent developments.

### 6.1 METHODOLOGY

The methodology employed in generating non-residential space demand projections is as follows:

- The employment forecasts are first disaggregated by type of employment into the following key categories: primary, work at home, industrial, commercial, and institutional;
- To convert employment growth into space requirements, space growth factors are applied. These are related to the amount of new space built in a time period to accommodate the growth in employment in the same category; and
- The space factors are derived based on historical statistics, industry consensus, and expectations on how these factors might change over the coming decades.

### 6.2 EMPLOYMENT PROJECTIONS BY KEY CATEGORIES

Figure 46 presents the employment forecast by key category based on estimates for employment growth by industry from Section 3.4. Over the 2011-2041 period, commercial employment (including office and retail & other services) is expected to experience the biggest increase, followed by industrial employment.

Figure 46

#### Average Annual Employment Growth by Industry/Work Activity, 2001-2041

	Primary	Industrial	Commercial		Institutional	Work at Home	Total
			Office	Retail/ Hosp.			
	<i>Persons (annual average)</i>						
2001-2006	(10)	389	461	930	1,039	17	2,826
2006-2011 <i>e</i>	(16)	(189)	178	(792)	105	(50)	(764)
2011-2021 <i>f</i>	(1)	647	292	595	606	56	2,196
2021-2031 <i>f</i>	2	534	144	524	306	261	1,771
2031-2041 <i>f</i>	3	843	369	812	828	169	3,023

Source: Historical: Census Canada; Forecast: Altus Group Economic Consulting

### 6.3 SPACE FACTORS

In order to translate projected employment growth by key category into demand for new net non-residential space, space factors are applied. These space factors are based on historical statistics, industry consensus, and expectations on how these factors might change over the coming decades.

- **Industrial:** In general, the space factor for industrial employment is expected to be 900 sq. ft. per employee over the short-term and eventually increase to 910 sq. ft. per employee. The increase is primarily due to the growth in the logistic warehouse sector, in which the sq. ft. per employee ratio is generally higher than other industrial sectors (Figure 47);
- **Commercial:** Standard assumptions for office factors are around 200 sq. ft. per employee. Moving forward, this analysis expects this ratio is going to continue to hold. Similarly, this report assumes the space factor for retail/other services category to be some 360 sq ft. per employee (Figure 47);
- **Institutional:** Based on historical statistics and industry consensus, this report assumes that the space factor for institutional employment is about 700 sq. ft. per employee (Figure 47). While government offices have smaller space factors, other institutional sectors, such as schools and hospitals have much large space factors.

Figure 47

#### Space Factors Applied to Employment by Industry

	Industrial	Commercial		Institutional
		Office	Retail/Other	
	<i>Sq. Ft. per Employee</i>			
2011-2016 <i>f</i>	900	200	360	700
2016-2021 <i>f</i>	900	200	360	700
2021-2026 <i>f</i>	910	200	360	700
2026-2031 <i>f</i>	910	200	360	700
2031-2036 <i>f</i>	910	200	360	700
2036-2041 <i>f</i>	910	200	360	700

Source: Altus Group Economic Consulting

### 6.4 NON-RESIDENTIAL SPACE PROJECTIONS 2011-2041

Non-residential space demand over the 2011-2041 period is estimated based on the projected employment growth by key category and space factors. The results are presented in Figure 48:

- During the 2006-2011 period, the total demand for non-residential space is negative due to employment lost in industrial and retail/other service sectors; and
- During the current census period (2011-2016), there is expected to be a strong rebound in non-residential space demand due to the recovery in local economy.

Figure 48

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**Non-Residential Space Demand, City of London, 2001-2041**

Total	Industrial	Commercial		Institutional	Total
		Office	Retail/Other		
<i>Square Feet (000s)</i>					
2001-2006 <i>a</i>	1,749	461	1,675	3,637	7,521
2006-2011 <i>a</i>	(848)	178	(1,426)	369	(1,728)
2011-2016 <i>f</i>	3,020	391	1,302	2,875	7,588
2016-2021 <i>f</i>	2,800	194	841	1,364	5,199
2021-2026 <i>f</i>	2,494	81	740	833	4,147
2026-2031 <i>f</i>	2,973	208	1,146	1,311	5,637
2031-2036 <i>f</i>	3,648	352	1,290	3,145	8,435
2036-2041 <i>f</i>	4,025	387	1,632	2,648	8,692

Source: Altus Group Economic Consulting

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Figure 49 illustrates the estimates for net non-residential space requirements over the 2011-2041 period:

- Due to the decline in employment over the 2006-2011 period, there is currently some vacant/under-utilized non-residential space in the City of London. This “alternative supply” will likely be absorbed (or replaced) over the next 10 years;
- In total, over 37.4 million sq. ft. net non-residential space is required to accommodate projected employment growth in the city over the forecast period;
- A large share of the growth is expected to be during the last decade of the forecast period;
- Figure 50 presents the expected needs for nursing home space over the forecast period based on the demographic forecast and various space factors. This is part of the overall institutional space demand.

Figure 49

**Net Non-Residential Space Requirements, City of London, 2006-2041**

Total Demand	Industrial	Commercial		Institutional	Total
		Office	Retail/Other		
<i>Square Feet (000s)</i>					
2006-2011 <i>a</i>	(848)	178	(1,426)	369	(1,728)
2011-2016 <i>f</i>	3,020	391	1,302	2,875	7,588
2016-2021 <i>f</i>	2,800	194	841	1,364	5,199
2021-2026 <i>f</i>	2,494	81	740	833	4,147
2026-2031 <i>f</i>	2,973	208	1,146	1,311	5,637
2031-2036 <i>f</i>	3,648	352	1,290	3,145	8,435
2036-2041 <i>f</i>	4,025	387	1,632	2,648	8,692
2011-2041 <i>f</i>	18,960	1,611	6,951	12,176	39,698
<i>Alternative Supply<sup>1</sup></i>					
<i>Square Feet (000s)</i>					
2011-2016 <i>f</i>	424	-	713	-	1,137
2016-2021 <i>f</i>	424	-	713	-	1,137
2021-2026 <i>f</i>	-	-	-	-	-
2026-2031 <i>f</i>	-	-	-	-	-
2031-2036 <i>f</i>	-	-	-	-	-
2036-2041 <i>f</i>	-	-	-	-	-
2011-2041 <i>f</i>	848	-	1,426	-	2,275
<i>Required New Supply</i>					
<i>Square Feet (000s)</i>					
2011-2016 <i>f</i>	2,600	390	590	2,870	6,450
2016-2021 <i>f</i>	2,380	190	130	1,360	4,060
2021-2026 <i>f</i>	2,490	80	740	830	4,140
2026-2031 <i>f</i>	2,970	210	1,150	1,310	5,640
2031-2036 <i>f</i>	3,650	350	1,290	3,150	8,440
2036-2041 <i>f</i>	4,030	390	1,630	2,650	8,700
2011-2041 <i>f</i>	18,120	1,610	5,530	12,170	37,430

1. Assumed absorption of underutilized space; No replacement supply built in

Source: Altus Group Economic Consulting

Figure 50

**Nursing Home Space Growth Projections, City of London, 2006-2041**

	Population Growth 75+	Incidence <sup>1</sup>	Nursing Home	Space	Percent of
	Persons	Percent	Beds	Demand <sup>2</sup>	Total Institutional
			Beds	Sq. Ft.	Percent
2006-2011 <i>e</i>	2,030	4.6	95	63,650	1.8
2011-2021 <i>f</i>	6,600	4.6	305	204,350	4.8
2021-2031 <i>f</i>	16,000	4.6	740	495,800	23.2
2031-2041 <i>f</i>	14,700	4.6	680	455,600	2.7

<sup>1</sup> Based on CMHC 2011 Seniors Housing Report, Ontario (Middlesex County incidence rate)

<sup>2</sup> Based on 670 sq. ft. per bed planning rule.

Source: Altus Group Economic based on data from CMHC and the Daily Commercial News

## 7 ALTERNATIVE SCENARIOS

This chapter presents the alternative growth scenarios (high and low) for the City of London over the forecast period.

### 7.1 HIGH GROWTH SCENARIO

The high scenario is based on the assumption that the City of London will see an average annual population growth of 1.5% over the 2011-2041 period (Figure 51). This scenario is differentiated from the base case scenario which yields, based on a best-estimate economic model, an annual average growth rate of 0.91% per year.

Over the course of the 30-year projection (2011-2041) the effect of a 1.5% per annum assumption implies total growth in population of some 206,000 persons compared to 114,000 persons in the base case scenario.

Figure 51

**Population by Age Group, City of London, High Growth Scenario, 1996-2041**

Age Groups	Census				Projections					
	1996	2001	2006	2011	2016	2021	2026	2031	2036	2041
	<i>Number of Persons</i>									
0-4	22,665	19,235	18,475	19,990	20,700	22,400	24,300	26,200	27,800	29,500
5-9	22,245	22,330	19,540	19,005	19,200	20,200	21,700	23,600	25,400	26,800
10-14	21,670	22,600	22,830	20,365	19,700	20,500	21,600	23,300	25,300	27,200
15-19	20,525	22,720	24,405	24,715	27,600	28,200	29,900	31,400	34,700	38,000
20-24	24,515	25,880	28,195	28,920	35,200	37,200	38,700	41,100	44,300	49,200
25-29	25,850	23,360	25,070	26,990	27,000	33,000	34,600	36,300	37,800	40,400
30-34	29,285	24,025	22,755	23,835	28,400	27,900	33,800	35,600	37,600	39,300
35-39	27,685	27,975	23,805	22,530	25,300	29,000	28,600	34,600	36,600	38,700
40-44	25,175	27,390	28,210	24,235	25,400	28,500	32,700	32,600	39,300	42,000
45-49	22,710	25,015	27,860	28,495	22,500	23,500	26,400	30,500	30,000	36,200
50-54	16,865	22,295	24,890	27,835	27,600	22,600	23,600	26,700	30,800	30,400
55-59	13,620	16,530	21,915	24,265	26,600	27,000	22,100	23,100	26,100	30,200
60-64	12,345	13,140	16,080	21,255	23,700	26,000	26,500	21,800	23,000	26,000
65-69	11,910	11,955	12,715	15,540	20,600	23,500	25,900	26,400	22,100	23,500
70-74	11,355	11,215	11,280	11,950	15,700	20,800	23,800	26,200	27,200	23,500
75-79	7,965	9,995	10,025	10,070	11,500	14,800	19,600	22,400	24,900	26,000
80-84	5,255	6,155	8,150	8,030	8,300	9,600	12,400	16,400	19,000	21,300
85+	4,000	4,715	6,195	8,030	9,400	10,400	11,900	14,800	19,600	24,400
<b>Total</b>	<b>325,640</b>	<b>336,530</b>	<b>352,395</b>	<b>366,055</b>	<b>394,500</b>	<b>425,000</b>	<b>457,900</b>	<b>493,300</b>	<b>531,400</b>	<b>572,500</b>

Totals may not add due to rounding

For 2011, the total population is from the 2011 Census. The detailed distribution by age cohort is based on Altus model

Source: Altus Group Economic Consulting

The driver of the high growth scenario is consistently higher net migration into Middlesex and the City of London, which in turn would need to be supported by higher employment growth consistently over the period. The high growth scenario implies requirements for the creation of 125,720 jobs

over the forecast period (Figure 52), almost twice the amount of the base scenario.

Figure 52

<b>Employment</b>	<b>City of London</b>	<b>Middlesex County</b>
	<i>Persons</i>	
2001	179,365	201,495
2006	193,495	220,100
2011	189,674	215,733
2016	208,498	237,149
2021	224,033	254,798
2026	239,770	272,629
2031	259,892	295,469
2036	286,324	325,582
2041	315,396	358,659
<b>Total Change</b>		
2001-2011	10,309	14,238
2011-2021	34,359	39,065
2021-2031	35,858	40,670
2031-2041	55,505	63,190
2011-2041	125,722	142,926
<b>Annual Average Change</b>		
2001-2011	1,031	1,424
2011-2021	3,436	3,907
2021-2031	3,586	4,067
2031-2041	5,550	6,319
2011-2041	4,191	4,764
<b>Annual Percent Change</b>		
2001-2011	0.6	0.7
2011-2021	1.7	1.7
2021-2031	1.5	1.5
2031-2041	2.0	2.0
2011-2041	1.7	1.7

Source: Projections: Altus Group Economic Consulting; Historical: Census of Canada

Figure 53 presents the households requirements based on the high population growth scenario – some 100,800 new households in London are required to support this level of growth over the period of 2006-2041.

Based on the employment forecast, the study also estimates the demand for non-residential space over the forecast period based on the high growth scenario – the city will need some 70.2 million sq. ft. employment space over

the 2011-2041 period to accommodate the estimated employment growth(Figure 54).

Figure 53

---

### Annual Household Growth, City of London, High Growth Scenario, 1996-2041

Census Periods		Single and	Row	Apartments	Total
		Semis		and Other	
		<i>Occupied Dwelling Units</i>			
1996-2001	<i>a</i>	1,089	264	252	1,605
2001-2006	<i>a</i>	622	274	654	1,550
2006-2011	<i>e</i>	789	266	574	1,629
2011-2016	<i>f</i>	1,243	382	859	2,484
2016-2021	<i>f</i>	1,581	456	967	3,004
2021-2026	<i>f</i>	1,695	458	973	3,125
2026-2031	<i>f</i>	1,790	453	1,017	3,260
2031-2036	<i>f</i>	1,802	434	987	3,223
2036-2041	<i>f</i>	1,898	472	1,137	3,507
<b>2011-2041</b>					
	Avg. Annual	1,430	380	850	2,660
	Total	42,900	11,400	25,500	79,800
Census Periods		<i>Percent Distribution</i>			
1996-2001	<i>a</i>	68	16	16	100
2001-2006	<i>a</i>	40	18	42	100
2006-2011	<i>e</i>	48	16	35	100
2011-2016	<i>f</i>	50	15	35	100
2016-2021	<i>f</i>	53	15	32	100
2021-2026	<i>f</i>	54	15	31	100
2026-2031	<i>f</i>	55	14	31	100
2031-2036	<i>f</i>	56	13	31	100
2036-2041	<i>f</i>	54	13	32	100
2011-2041		54	14	32	100

Totals may not add due to rounding

*a*: Final Census of Canada data

*e*: Estimates based on actual CMHC completions data

*f*: Forecasts by Altus Group Economic Consulting

Source: Altus Economics based on data from CMHC and Census of Canada

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Figure 54

### Net Non-Residential Space Requirements, City of London, High Growth Scenario 2006-2041

Total Demand	Industrial	Commercial		Institutional	Total
		Office	Retail/Other		
<i>Square Feet (000s)</i>					
2006-2011 <i>a</i>	(848)	178	(1,426)	369	(1,728)
2011-2016 <i>f</i>	4,677	528	1,731	3,730	10,666
2016-2021 <i>f</i>	5,091	380	1,422	2,496	9,389
2021-2026 <i>f</i>	5,202	288	1,413	2,096	8,999
2026-2031 <i>f</i>	6,232	465	1,956	2,799	11,452
2031-2036 <i>f</i>	7,496	661	2,256	4,932	15,345
2036-2041 <i>f</i>	8,461	744	2,745	4,693	16,642
2011-2041 <i>f</i>	37,159	3,064	11,523	20,747	72,494
<i>Alternative Supply<sup>1</sup></i>					
<i>Square Feet (000s)</i>					
2011-2016 <i>f</i>	424	-	713	-	1,137
2016-2021 <i>f</i>	424	-	713	-	1,137
2021-2026 <i>f</i>	-	-	-	-	-
2026-2031 <i>f</i>	-	-	-	-	-
2031-2036 <i>f</i>	-	-	-	-	-
2036-2041 <i>f</i>	-	-	-	-	-
2011-2041 <i>f</i>	848	-	1,426	-	2,275
<i>Required New Supply</i>					
<i>Square Feet (000s)</i>					
2011-2016 <i>f</i>	4,250	530	1,020	3,730	9,530
2016-2021 <i>f</i>	4,670	380	710	2,500	8,260
2021-2026 <i>f</i>	5,200	290	1,410	2,100	9,000
2026-2031 <i>f</i>	6,230	460	1,960	2,800	11,450
2031-2036 <i>f</i>	7,500	660	2,260	4,930	15,350
2036-2041 <i>f</i>	8,460	740	2,740	4,690	16,630
2011-2041 <i>f</i>	36,310	3,060	10,100	20,750	70,220

1. Assumed absorption of underutilized space; No replacement supply built in

Source: Altus Group Economic Consulting

## 7.2 LOW GROWTH SCENARIO

The low growth scenario is based on the assumption that the current economic uncertainty internationally will linger longer than expected, combined with sharper-than expected negative spin offs across the Ontario economy stemming from fiscal austerity at the provincial level. This scenario results in employment growth over the next decade to be half the rate of the base scenario. More specifically, the average annual growth for employment is about 0.6% during the 2011-2021 period under the low growth scenario, instead of the 1.1% for the base scenario (Figure 55).

The slower employment expansion reduces the need and draw on migration resulting in a slower population growth. Population growth will slow to a pace of 0.75% over the 2011-2041 period (Figure 56) and the total new



households will be some 55,650 new units rather than 64,925 units reported in the base scenario (Figure 57).

The slower employment growth also means less demand for non-residential space over the forecast period – in total, the city only need some 29.4 million sq. ft. of employment space during the 2011-2041 period, some 8.1 million sq. ft. less than the base scenario (Figure 58).

Figure 55

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**Place of Work Employment, City of London and Middlesex County, Low Growth Scenario, 2001-2041**

<u>Employment</u>	City of London	Middlesex County
	<i>Persons</i>	
2001	179,365	201,495
2006	193,495	220,100
2011	189,674	215,733
2016	196,325	223,337
2021	200,374	227,945
2026	207,518	236,026
2031	217,182	246,999
2036	231,101	262,828
2041	245,828	279,544
<b><u>Total Change</u></b>		
2001-2011	10,309	14,238
2011-2021	10,700	12,212
2021-2031	16,807	19,054
2031-2041	28,646	32,545
2011-2041	56,154	63,811
<b><u>Annual Average Change</u></b>		
2001-2011	1,031	1,424
2011-2021	1,070	1,221
2021-2031	1,681	1,905
2031-2041	2,865	3,254
2011-2041	1,872	2,127
<b><u>Annual Percent Change</u></b>		
2001-2011	0.6	0.7
2011-2021	0.6	0.6
2021-2031	0.8	0.8
2031-2041	1.2	1.2
2011-2041	0.9	0.9

Source: Projections: Altus Group Economic Consulting; Historical: Census of Canada

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**Figure 56 Population by Age Group, City of London, Low Growth Scenario, 1996-2041**

Age Groups	Census				Projections					
	1996	2001	2006	2011	2016	2021	2026	2031	2036	2041
	<i>Number of Persons</i>									
0-4	22,665	19,235	18,475	19,990	20,400	20,800	21,100	21,100	22,100	23,500
5-9	22,245	22,330	19,540	19,005	19,400	20,100	20,600	21,000	21,100	22,000
10-14	21,670	22,600	22,830	20,365	18,300	19,800	21,100	21,400	22,000	22,200
15-19	20,525	22,720	24,405	24,715	21,500	21,600	25,600	25,900	26,500	27,200
20-24	24,515	25,880	28,195	28,920	28,700	25,500	27,700	31,100	31,900	32,900
25-29	25,850	23,360	25,070	26,990	28,500	28,400	24,700	27,400	31,200	31,900
30-34	29,285	24,025	22,755	23,835	26,400	28,000	28,700	24,900	27,800	31,500
35-39	27,685	27,975	23,805	22,530	23,800	26,000	28,200	28,600	25,100	27,900
40-44	25,175	27,390	28,210	24,235	22,000	24,300	27,600	29,300	29,900	26,600
45-49	22,710	25,015	27,860	28,495	23,700	21,300	23,400	26,900	28,700	29,200
50-54	16,865	22,295	24,890	27,835	27,100	23,500	21,200	23,300	27,000	28,800
55-59	13,620	16,530	21,915	24,265	26,600	26,400	23,100	20,800	22,900	26,500
60-64	12,345	13,140	16,080	21,255	23,200	25,600	25,700	22,400	20,300	22,400
65-69	11,910	11,955	12,715	15,540	19,900	22,500	25,100	25,100	22,000	20,100
70-74	11,355	11,215	11,280	11,950	14,500	19,200	22,100	24,400	24,500	21,700
75-79	7,965	9,995	10,025	10,070	10,900	13,200	17,700	20,300	22,500	22,700
80-84	5,255	6,155	8,150	8,030	8,100	8,900	10,900	14,700	17,000	19,000
85+	4,000	4,715	6,195	8,030	9,300	10,100	11,200	13,300	17,300	21,500
Total	325,640	336,530	352,395	366,055	372,700	385,400	405,700	421,900	439,800	457,600

Totals may not add due to rounding

Source: Altus Group Economic Consulting

Figure 57

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**Annual Household Growth, City of London, Low Growth Scenario, 1996-2041**

Census Periods		Single and	Row	Apartments	Total
		Semis		and Other	
<i>Occupied Dwelling Units</i>					
1996-2001	a	1,089	264	252	1,605
2001-2006	a	622	274	654	1,550
2006-2011	e	789	266	574	1,629
2011-2016	f	574	220	398	1,192
2016-2021	f	831	272	445	1,548
2021-2026	f	927	297	609	1,832
2026-2031	f	808	271	644	1,723
2031-2036	f	850	260	557	1,666
2036-2041	f	828	252	542	1,622
<b>2011-2041</b>					
Avg. Annual		690	225	455	1,370
Total		20,700	6,750	13,650	41,100

Census Periods		<i>Percent Distribution</i>			
1996-2001	a	68	16	16	100
2001-2006	a	40	18	42	100
2006-2011	e	48	16	35	100
2011-2016	f	48	18	33	100
2016-2021	f	54	18	29	100
2021-2026	f	51	16	33	100
2026-2031	f	47	16	37	100
2031-2036	f	51	16	33	100
2036-2041	f	51	16	33	100
2011-2041		50	16	33	100

Totals may not add due to rounding

a: Final Census of Canada data

e: Estimates based on actual CMHC completions data

f: Forecasts by Altus Group Economic Consulting

Source: Altus Group Economic Consulting based on data from CMHC and Census of Canada

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Figure 58

**Net Non-Residential Space Requirements, City of London, Low Growth Scenario 2006-2041**

	Industrial	Commercial		Institutional	Total
		Office	Retail/Other		
<b>Total Demand</b>					
<i>Square Feet (000s)</i>					
2006-2011 <i>a</i>	(848)	178	(1,426)	369	(1,728)
2011-2016 <i>f</i>	857	212	742	1,759	3,570
2016-2021 <i>f</i>	1,380	79	485	677	2,622
2021-2026 <i>f</i>	2,338	76	711	811	3,936
2026-2031 <i>f</i>	2,766	192	1,099	1,251	5,308
2031-2036 <i>f</i>	3,392	330	1,226	3,038	7,986
2036-2041 <i>f</i>	3,746	363	1,562	2,531	8,203
2011-2041 <i>f</i>	14,479	1,253	5,825	10,067	31,624
<b>Alternative Supply<sup>1</sup></b>					
<i>Square Feet (000s)</i>					
2011-2016 <i>f</i>	424	-	713	-	1,137
2016-2021 <i>f</i>	424	-	713	-	1,137
2021-2026 <i>f</i>	-	-	-	-	-
2026-2031 <i>f</i>	-	-	-	-	-
2031-2036 <i>f</i>	-	-	-	-	-
2036-2041 <i>f</i>	-	-	-	-	-
2011-2041 <i>f</i>	848	-	1,426	-	2,275
<b>Required New Supply</b>					
<i>Square Feet (000s)</i>					
2011-2016 <i>f</i>	430	210	30	1,760	2,430
2016-2021 <i>f</i>	960	80	-	680	1,720
2021-2026 <i>f</i>	2,340	80	480	810	3,710
2026-2031 <i>f</i>	2,770	190	1,100	1,250	5,310
2031-2036 <i>f</i>	3,390	330	1,230	3,040	7,990
2036-2041 <i>f</i>	3,750	360	1,560	2,530	8,200
2011-2041 <i>f</i>	13,640	1,250	4,400	10,070	29,360

1. Assumed absorption of underutilized space; No replacement supply built in

Source: Altus Group Economic Consulting