

**City-Owned Industrial Land  
(COIL) Development Strategy  
Phase 1 Report: Industrial  
Land Requirements**



CLAYTON  
RESEARCH

# **City-Owned Industrial Land (COIL) Development Strategy Phase 1 Report: Industrial Land Requirements**

Prepared for:

**City of Kingston  
Planning and Development Services**

Prepared by:

**Clayton Research Associates Limited**

1580 Kingston Road Toronto Ontario M1N 1S2

Phone: (416) 699-5645 Fax: (416) 699-2252

clayton@clayton-research.com

www.clayton-research.com

in Conjunction with

**Clark Consulting Services**

30 North St. Port Hope Ontario L1A 1T6

Phone: (888) 852-8619 Fax: (905) 885-4785

ccs@clarkcs.com

www.clarkcs.com

**Totten Sims Hubicki**

654 Norris Court Kingston Ontario K7P 2R9

Phone: (613) 389-3703 Fax: 613-389-6729

kingston@tsh.ca

www.tsh.ca

May 7, 2004

## EXECUTIVE SUMMARY

---

Clayton Research, in conjunction with Clark Consulting Services and Totten Sims Hubicki Associates, has been retained to provide a 24-year projection of industrial park land requirements for the City of Kingston. This work entails Phase One of the City-Owned Industrial Land Development Strategy, a project initiated by the City of Kingston and managed by Clark Consulting Services.

The projections of industrial park land requirements for the City of Kingston take into consideration:

- Industrial land demand, based on Kingston's prospects for job growth and economic development;
- Inventory of existing and potential industrial lands; and
- The suitability of this inventory to meet the potential demand

All told, employment in the City of Kingston is expected to expand by 14,430 jobs over the period 2002-2026. This represents an average annual rate of growth of 0.8 percent per year.

About 40 percent of this employment is expected to occur in an industrial park setting (5,590 jobs), with the bulk taking place among regional service office-type sectors rather than light or heavy industrial operations. Research and development and warehouse/distribution centres will also likely feature in the prospects for job creation.

Kingston has 2,940 acres of industrial land within its urban area. While roughly half of this is vacant, only 152 acres are City-owned serviced vacant lots within the four existing industrial parks. There is an insufficient supply of City-owned industrial park vacant lands to meet the longer-term land demands. However, including City-owned land not currently serviced, there appears to be an adequate supply of lands within the confines of the present City-owned parks and their adjacent territories.

Not all of the available land, however, may be sufficient for each of the intended uses. Large tracts of available land are located in the St. Lawrence Industrial Park. However, the location and attributes of this park are such that demand will likely not be very strong for some years to come. The best located parks, including Cataraqui Industrial Estates and the Joseph P. Clyde / Kingston New Industrial Park have limited amounts of serviced City-owned lands and yet these locations are the most attractive to potential

development. Un-serviced lands adjacent to Cataraqui Industrial Estates will likely play a key role in promoting economic development in Kingston. The timely servicing and development of these lands, therefore, is key to the industrial park strategy.

# TABLE OF CONTENTS

	Page
<b>EXECUTIVE SUMMARY .....</b>	<b>i</b>
<b>1 INTRODUCTION.....</b>	<b>1</b>
1.1 Workplan .....	1
1.2 Report Structure .....	2
1.3 Caveat.....	2
<b>2 EMPLOYMENT GROWTH ASSESSMENT.....</b>	<b>3</b>
2.1 Macroeconomic Environment .....	3
2.2 Employment Growth In The Local Economy.....	7
2.3 Kingston’s Economic Development Prospects.....	10
2.4 Employment Growth Prospects, 2002-2026.....	14
<b>3 EMPLOYMENT GROWTH PROSPECTS BY SECTOR .....</b>	<b>16</b>
3.1 Employment Growth By Sector, 1996-2002 .....	16
3.2 Employment Growth by Firm Size, 1996-2002.....	17
3.3 Key Factors Behind the Employment Forecast by Sector .....	18
3.4 Employment Growth Forecast by Sector, 2002-2026 .....	20
<b>4 KINGSTON’S INDUSTRIAL LAND STRUCTURE.....</b>	<b>23</b>
4.1 City-Owned Industrial Parks.....	24
4.2 Recent Development .....	27
4.3 Land Absorption By Sector.....	28
4.4 Land Requirements.....	28
4.5 Land Absorption By Industrial Area .....	31
<b>5 CONCLUSIONS FOR CITY-OWNED INDUSTRIAL LANDS .....</b>	<b>35</b>

# 1 INTRODUCTION

---

Clayton Research in conjunction with Clark Consulting Services and Totten Sims Hubicki Associates has been retained to provide a projection of industrial park land requirements for the City of Kingston through to 2026. This work entails Phase One of the City Owned Industrial Land Development Strategy, a project initiated by the City of Kingston, and managed by Clark Consulting Services.

## 1.1 WORKPLAN

The workplan for this phase was undertaken as three distinct steps:

- Step 1: Assessment of industrial land demand. This assessment includes an economic review of the Kingston economy in a macroeconomic context. Consultations were undertaken as part of this step with City officials, Kingston Economic Development Corporation (KEDCO) and major business interests in Kingston. In addition key documents on economic development were reviewed. As part of this step, Kingston's economic development prospects were assessed relative to competing areas. Consultations with economic development officials in other jurisdictions were undertaken in conjunction with this assessment.
- Step 2: Compilation of the available and potential vacant industrial land inventory in Kingston. These data were assembled using a variety of sources, including the assessment role, data from City of Kingston and KEDCO, GIS information from the City of Kingston and field visits.
- Step 3: Assessment of the suitability of the existing and potential lands in Kingston to meet the forecasted demand. This assessment is based on the Clayton Research industrial land demand model. The appropriateness of vacant lands in the existing business parks to accommodate expected future demand, including type, form, quantity and location were reviewed in this step.

In addition to the analysis and consultation undertaken by the consultants on this project, two formal meetings were held with City planning staff inviting feedback. First, upon project start-up, a meeting was held reviewing the workplan, information requirements and the consultants' initial

understanding. Second, a presentation of initial findings was made to City staff in December, 2003 prior to the preparation of this report.

## 1.2 REPORT STRUCTURE

In addition to this first chapter, the report has four chapters as follows:

- **Chapter 2** describes the macroeconomic assessment and economic development assessment used to drive employment, and thus industrial land requirements in the city;
- **Chapter 3** presents projections of employment growth for the City of Kingston in the 2002-2026 period by sector;
- **Chapter 4** presents projections of net new industrial park land requirements in the City of Kingston based on the employment projections; and
- **Chapter 5** provides strategic conclusions from the analysis.

## 1.3 CAVEAT

The estimates and projections presented in this report rely on the best information available at the time of publication from various agencies and sources such as Canada Mortgage and Housing Corp. (CMHC), Statistics Canada, the City of Kingston and KEDCO. In some 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. The City may wish to establish a monitoring program to regularly review these projections against historical activity.

---

## 2 EMPLOYMENT GROWTH ASSESSMENT

---

This chapter describes the macroeconomic assessment used to drive the forecast of employment growth, and thus industrial land requirements in the city.

### 2.1 MACROECONOMIC ENVIRONMENT

The economic forecasting used in this report has the following components:

- Historical and forecasted macroeconomic conditions in Canada, Ontario and regions within the province; and
- Review of historical trends in the City of Kingston economy, in particular employment.

Kingston's future employment growth takes place in the context of the general economic environment, which in turn is dependent upon the macro economy in Ontario and the rest of Canada.

#### 2.1.1 Canada

In the past 20 years, employment growth in Canada averaged 1.5 percent per year, and the overall economy has expanded by 2.7 percent.<sup>1</sup> The difference between economic growth and employment growth is the contribution of productivity, which in Canada contributed about 1.2 percent per annum to economic growth.

During the next 20 to 30 years, a growing domestic labour shortage is expected to develop within the Canadian labour market. As the Canadian population ages, there will be fewer people entering the labour force to replace those retiring from it<sup>2</sup>.

The impending shortage of labour supply from the domestic population can, in part, be offset through effective immigration policy. There is a question, however, as to Canada's continuing ability to attract sufficient immigrants

<sup>1</sup> Average annual growth in real (chain-weighted) Gross Domestic Product (GDP).

<sup>2</sup> There is a large volume of literature examining the impact of the aging population on labour force activity in Canada and other industrialized countries. For a good review, see in particular: Boothby, D., Dubois, J., Fougère, F., Rainville, B., Labour Market Implications of an Aging Population, Working Paper 2003 A-01, Human Resources Development Canada (2003); and Kuhn, P., Effects of Population Aging on Labour Market Flows in Canada: Analytical Issues and Research Priorities, Working Paper 2003 A-02, Human Resources Development Canada (2003)

with marketable skills to the country. In the long run, therefore, immigration's ability to contribute to the labour force may be somewhat limited.

According to projections of population, labour force participation and economic growth done by Clayton Research, therefore, the impending shortage of labour supply will likely lead to fundamentally lower employment growth over the 2001-2026 period averaging about 0.9 percent, trending downward to about 0.6 percent by the year 2026.

However, the degree to which the pace of economic growth is likely to slow should be tempered by favourable prospects for productivity growth in Canada (i.e., economic growth outpaces job growth in the economy as long as productivity continues to advance). In general it is felt that the impending labour shortage will drive up demand for higher-skilled workers, resulting in more private and public investment in skills development, ultimately leading to higher rates of productivity<sup>3</sup>.

## 2.1.2 Ontario

On three important economic measures, Ontario has outperformed Canada as a whole during the period 1981-2001:

- Real GDP growth: Ontario has expanded 3.2 percent – nearly half a percentage point per year faster than Canada as a whole;
- Employment growth: Ontario's job force has expanded 1.7 percent per year – 0.2 percentage points faster than Canada as a whole;
- Productivity gains: Ontario's productivity advanced at 1.6 percent per year – 0.3 percentage points faster than for Canada as a whole.

It is expected that Ontario's economy will continue to grow slightly faster than the Canadian economy over the forecast period. However, the gap between Ontario's economic performance and that for Canada as a whole is anticipated to narrow somewhat through time. Ontario is also expected to continue to outperform the rest of the country in terms of productivity gains.

<sup>3</sup> Boothby, D., et al (2003)

As a result, there will be a narrowing gap between Ontario's job creation rate in the next ten years in comparison to Canada as a whole, and then some convergence will occur thereafter. Factors included in this macroeconomic outlook are:

- Ontario's economy has proportionately more high-growth, high value-added and high productivity sectors such as financial, business and professional services; manufacturing (especially the higher growth plastics & rubber, electrical products and transportation equipment) and wholesale trade; and
- Ontario benefits from receiving a large share of the country's new immigrants, particularly important when labour force growth significantly declines and the country begins to rely more heavily on immigration for its employment needs.

All told, according to modelling undertaken by Clayton Research, the Ontario economy will likely generate new jobs over the 2001-2026 period at a rate of about 1.0 percent per year – about 0.1 percentage point per year faster than the national average.

### **2.1.3 Regions within Ontario**

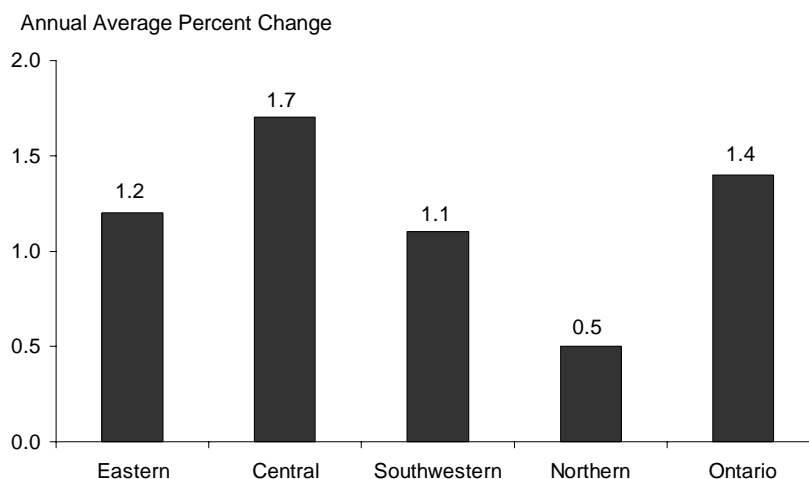
Between 1987 and 2002 employment growth across the Province of Ontario averaged 1.4 percent per year, according to the Statistics Canada *Labour Force Survey*<sup>4</sup>. The pattern of job growth was not dispersed evenly across the province, however. Central Ontario (which includes the Greater Toronto Area - home to about 45 percent of Ontario's employed) recorded the fastest pace of employment growth through the period at 1.7 percent – about 0.3 percentage points faster than the provincial average (see Figure 1).

According to modelling undertaken by Clayton Research, the Central Ontario economy will likely generate net jobs over the 2001-2026 period at the rate of about 1.3 percent per year – about 0.3 percentage points faster than the provincial average (1.0 percent) and about twice the pace in the rest of Ontario (0.6 percent).

<sup>4</sup> *These data are from Statistics Canada's Labour Force Survey (LFS). The LFS provides a consistent (i.e., free from definition changes) annual data series starting in 1987. Many references to annual LFS data made in this report will therefore begin in 1987, even though some of the analysis based on Census data or other sources may reach back farther.*

Figure 1

### Employment Growth by Region, Ontario, 1987-2002



Source: Clayton Research based on data from Statistics Canada (Labour Force Survey)

#### 2.1.4 Eastern Ontario

By contrast, job growth in Eastern Ontario, which includes the City of Kingston, has generally been slightly lower than Ontario as a whole. In the 1987-2002 period, Growth in Eastern Ontario averaged 1.2 percent per year – about 0.2 percentage points lower than the province as a whole.

Eastern Ontario in general and the City of Kingston in particular will benefit from a number of positive economic attributes. However, from a macroeconomic perspective, growth in Eastern Ontario will likely continue to under-perform relative to Central Ontario, which has the infrastructure and economic base to fuel relatively strong economic growth through the medium-term<sup>5</sup>.

All told, according to Clayton Research modelling, Eastern Ontario as a whole will likely generate job growth over the next 25 years of about 1.0 percent per year – about on par with the province as a whole. Stripping out the influence of the Ottawa market, however, Eastern Ontario's expected performance is closer to 0.67 percent per year – 0.3 percentage points below the provincial average.

<sup>5</sup> That is, across at least one full economic cycle.

Within Eastern Ontario, the Ottawa economy has generally recorded superior economic growth to the remainder of the region. Some of the remaining analysis in this section will look at the economic performance and prospects for Eastern Ontario less Ottawa, in order to remove the influence of this large urban centre.

## **2.2 EMPLOYMENT GROWTH IN THE LOCAL ECONOMY**

The projections used in this study cover the period 2002-2026. This section reviews historical employment growth up to 2002 – the latest year for which we have data. The review takes two stages, review of historical growth up to and including the 2001 Census, and then employment growth from 2001 to 2002 as revealed in data from the Business Registry Division of Statistics Canada. In all cases through this report, data presented for the City of Kingston relating to a time period before the 1998 amalgamation, will be a composite of data from the three former municipalities of Kingston, Kingston Township and Pittsburgh Township.

Job prospects in the City of Kingston are crucial to the analysis and projections of land requirements presented in this document. Employment levels and growth within the City of Kingston through the projection period are necessary in assessing non-residential space requirements in general and industrial/business park requirements in particular.

### **2.2.1 Place of Work vs. Place of Residence**

For this reason, the remainder of this chapter focuses primarily on jobs which are actually physically located in the City of Kingston (i.e., employment on a place of work (POW) basis<sup>6</sup>). Readers should be cautious that these data will differ from the more commonly cited ‘employed labour force’ data (e.g., from Labour Force Survey for Kingston CMA, or labour force by activity data in the Census) which describe employment by persons living in the area (i.e., on a place of residence (POR) basis).

As illustrated in Figure 2, there are two interesting trends with respect to POW vs. POR employment in Kingston:

<sup>6</sup> *Place of work (POW) employment is measured every five years by the Census of Canada, and includes jobs whose usual location is within the City of Kingston (whether or not those persons live in Kingston) and residents in the City of Kingston who either work from home, or have no fixed workplace (such as renovation contractors, truckers, etc.)*

- In 2001, there were some 12,695 more POW jobs located in the City of Kingston than there were employed persons who lived in the City (POR). This implies that the net amount of commuting into the City (inflow commuting less outflow commuting) in 2001 was 12,695 persons; and
- POW jobs located in the City advanced much more quickly through the census period than did employment by Kingston residents. As a result, the average daily net commuting into the City (or the former municipalities) rose 9 percent between 1996 and 2001 from 11,620 to 12,695 persons.

Figure 2

### Total Employment, City of Kingston, 1996 and 2001



\* Former municipalities of Kingston, Kingston Township and Pittsburgh Township  
Source: Clayton Research based on data from Statistics Canada

### 2.2.2 Total Employment Growth, 1996-2001

The City of Kingston generated some 4,055 net new jobs (POW basis) between 1996<sup>7</sup> and 2001 – representing an annual growth rate of 1.3 percent. This pace of employment growth generally underperformed growth during this period across Canada (where jobs were created at a pace of 2.0 percent per year), across Ontario (2.4 percent per year) or elsewhere in Ontario such as Central Ontario (3.0 percent per year) or Ottawa (2.4 percent per year<sup>8</sup>). Job growth in the City of Kingston during the period did

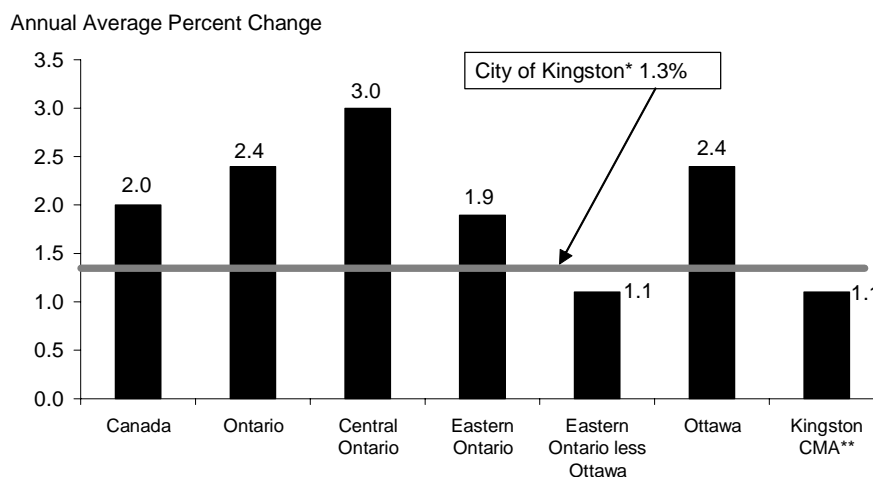
<sup>7</sup> Three former municipalities

<sup>8</sup> Ontario portion of the Ottawa CMA only

outpace those areas of Eastern Ontario outside of Ottawa (1.1 percent per year), and, in fact, outpaced job growth on a place of residence basis across the Kingston CMA (1.1 percent per year) (see Figure 3).

Figure 3

### Employment Growth, City of Kingston Relative to Other Areas of Ontario, 1996-2001



\* Place of work (POW) basis

\*\* Data adjusted to 2001 boundaries

Source: Clayton Research based on data from Census of Canada

Moreover, the rate of job growth during 1996-2001 is likely elevated in a longer-term context, as this period followed a bleak recessionary period for the local economy in the early 1990s which saw employment levels decline.

Employment growth in the city during this five year period, 4,055 jobs – or 811 jobs per year – is about on par with the long-term annual job growth between 1971 and 2001 of 925 jobs per year for Kingston Census Metropolitan Area (CMA)<sup>9</sup>.

### 2.2.3 Total Employment Growth, 2001-2002

The Business Registry Division (BRD) of Statistics Canada uses administrative records from Canada Customs and Revenue Agency to track the number of business by employee count which submit payroll remittances. According to the BRD, there were 61 net new employer businesses created within the City of Kingston between 2001 and 2002. Based on the size distribution of

<sup>9</sup> Stevens Associates, Documentation and Background Data to the Population and Housing Projections 2001-2026 for Kingston CMA and City of Kingston Issued March 20, 2003, (November 26, 2003) pp.9.

employer businesses in both 2001 and 2002 this implies that about 670 net new jobs may have been created in the year following the Census – representing a modest decline over the average pace of job creation prior to 2001 of 811 net new jobs per year.

Thus the pace of employment growth set during the 1996-2001 census period appears to have slowed somewhat since.

### **2.3 KINGSTON'S ECONOMIC DEVELOPMENT PROSPECTS**

A driver of the composition of employment growth is the economic development focus of the city. Economic growth within the City of Kingston is being actively promoted both by the City and by KEDCO, the independent Kingston Economic Development Corporation.

The *Focus Kingston* plan released by the City in 2002 set out a number of economic priorities to guide growth in the City over the medium term. Key components included:

- Local institutions, with their capacity for leading-edge research, can effectively partner with business to create new business opportunities for wealth and job creation;
- 'Incubation' of new businesses is a vital component of the strategy for economic prosperity; support systems for mentoring and securing business capital must be among the best;
- Deliberate action is needed to link local educational institutions with business to determine the skills needed and train people to compete in the new economy;
- Market Kingston to investors and tourists nationally and internationally;
- Seek opportunities for life-long learning and for disadvantaged persons; and
- Plan for agriculture within the City of Kingston.

Clearly the focus of these efforts is on increased employment in new economy sectors such as technology, knowledge-based employment, research and development, and light industrial.

A number of more concrete efforts by the City supporting the *Focus Kingston* plan have aimed at improving the economic development prospects:

- A transportation master plan is underway. Transportation and infrastructure are critical to support economic growth and population growth through the efficient movement of goods and people and through improved external linkages, but must be balanced with financial and geographical constraints. Municipal policies directly determine the attractiveness of competing modes of transportation, both within the City and inter-city. The City of Kingston recognizes that it must continually monitor its progress towards its goals, as well as maintaining a measure of flexibility in its objectives as conditions change.
- The City-owned industrial land strategy, of which the present report is part, is aimed at ensuring an adequate supply of vacant industrial lands to meet the anticipated demand through a 25 year planning period. Adequacy of lands, are, of course, important not only to ensuring that there is capacity to grow the employed labour force, but to demonstrate to potential employers that the city is truly open for business.
- The KEDCO 2001-2003 Business Plan, *Forging a Stronger Kingston* (2001) was highly focussed on specific projects such as the Youth Entrepreneurship Project, the Kingston Sport Industry Project, or the Linkages Project. Projects are divided into components and include measurable outcomes in terms of direct and indirect job creation, number of businesses started, and investment generated.
- KEDCO's 2004-2006 plan, *Vision for Economic Prosperity* (2003) has selected several sectors to develop as globally competitive economic clusters, including biotechnology and life sciences, advanced materials, tourism (identified as an existing, mature cluster) and culture, including arts recreation and sport. These are ambitious sectors to target, as they tend to appear prominently in the economic development plans of a number of municipalities across Canada and the U.S. The links available in Kingston to the research environment at Queen's University may prove helpful in partially fulfilling some of these targets.

KEDCO is actively engaged in the attraction of new businesses to the City of Kingston. In 2001 KEDCO drafted a business plan focusing on specific projects and have had some success in the past two years. The 2004-2006 plan includes ambitious targets for 6,900 new primary jobs<sup>10</sup> and over 5,000 accompanying jobs over the next six years, for a total gain of 12,000 net

<sup>10</sup> Jobs that "KEDCO and its partners help to create in the community through business expansion or recruitment" – KEDCO, 2004-2006 Plan, PP 32.

new jobs by 2010 – an average growth of 2,000 jobs per year. This target is acknowledged in the 2004-2006 Plan as being ambitious and a ‘quantum leap’ from historical job creation patterns. In reality, KEDCO’s efforts may attract some growth in excess of its recent pattern for a limited time. Ultimately prospects to improve the local economy’s performance relative to neighbouring jurisdictions and Ontario as a whole will remain modest as long as KEDCO’s economic development strategies are targeting economic sectors that are similar to those targeted by competing jurisdictions.

It should be noted, the City of Kingston and the separate entity KEDCO have somewhat independent economic development plans and initiatives, but that they are generally complementary to each other. The KEDCO strategy focuses on business recruitment, facilitating business linkages and promotion of entrepreneurship and the City’s efforts are to improve infrastructure and facilitate land development. From an economic development perspective, the two approaches are very complementary.

### **2.3.1 Kingston’s Competitive Position for Major Employers**

The success of economic development strategies in attracting and retaining businesses and employment depends, in part, on the local area’s competitive positions vis-à-vis neighbouring urban centres. Within Eastern Ontario, Ottawa and Cornwall compete directly with Kingston in attracting business investment, and it is helpful to look at how Kingston stacks up:

- Kingston is located on Highway 401 and is also connected along the Windsor-Quebec City rail line. Kingston’s highway and rail access give it good access to markets such as central and south-western Ontario to the west, Montreal and Quebec City to the East, Ottawa to the north, and the United States across the Thousand Islands Bridge to the southeast. However, Ottawa’s international airport would give it some advantage over Kingston, though Kingston’s Norman Rogers Airport does offer some cargo and commercial flights. Cornwall is also located on Highway 401 and has the Seaway International Bridge connecting it to the U.S.
- Kingston is the home of three high-ranked post-secondary institutions: Queen’s University, Royal Military College (RMC) – Canada’s only military college – and St. Lawrence College. Queen’s is one of the country’s leading universities with an internationally recognized reputation for scholarship and maintains a strong partnership with Kingston General Hospital. RMC is rated second among all smaller Canadian universities in terms of research. St.

Lawrence College is the only ISO 9000 designated college in North America. As such Kingston has a highly educated workforce, attractive for new firms. Ottawa residents also have a high rate of post-secondary education, with their own well-known post-secondary institutions.

From an industrial land supply perspective, Kingston competes with other Eastern Ontario jurisdictions with an offering of four City-owned industrial parks with an offering of 152 acres of serviced vacant land and the equivalent of some 393 net acres of un-serviced City-owned lands. This City-owned supply ranks in the middle of Ottawa and Cornwall:

- Cornwall has one 1,600 acre industrial park in the eastern part of the city. About 600 acres are still available, though services are not fully in place. It is zoned to include light, medium and heavy industrial uses. It has easy access to Highway 401, rail lines, the Seaway International Bridge to the U.S.A., a deep sea harbour and a regional airport. Cornwall also has an older industrial area on the west side of about 200 acres, which has little or no vacancy. Cornwall has no development charges.
- Ottawa has several industrial parks, with serviced and un-serviced land available. The redevelopment of the airport lands since 1997 when they were transferred from the Federal Government to the Ottawa International Airports Authority. The Authority has leased up to 70 percent of the first 100 acres that it serviced in 1997 and is considering serving a second block soon. While it is further from the Central Ontario region, Ottawa has its own large market and is geographically close to Montreal and other routes to the U.S.

### **2.3.2 Kingston's Local Competitive Position**

Kingston also competes directly with the smaller municipalities in the area for local employers: Loyalist Township, Belleville and Napanee to the west; Brockville and Gananoque to the east; and Smiths Falls to the north.

- Loyalist Township, Belleville, Napanee, Gananoque and Brockville are located along Highway 401 and along the major train route. Loyalist and Gananoque are closest to Kingston. As compared to Kingston, Loyalist Township, Belleville and Napanee are located closer to Toronto; Gananoque and Brockville are located closer to Montreal and Ottawa. Smiths Falls is located about mid-way between Kingston and Ottawa. It is at the intersection of Highways 15, 29 and 43, but not on any 400-level highway.

- Airport service is offered 15 kilometres from Belleville at CFB Trenton. Smiths Falls also has a small airport for commercial or recreational use. Brockville has an airport catering to private and commercial aircraft. Kingston has the only airport in the region with scheduled passenger and light cargo service (albeit limited) to major airports in Toronto, Ottawa and Montreal.
- Brockville has a deep water port located just a few blocks from the downtown core and slightly farther from the industrial areas.
- The 1000 Islands International Bridge to the U.S.A is located near Gananoque.
- Kingston has the only dry dock along this section of Lake Ontario and the St. Lawrence River.
- Belleville has one post-secondary institution, Loyalist College. The other locales have no post-secondary institutions, while Kingston has three.
- Both Kingston and Belleville have no development charges for industrial development. Smiths Falls also has no development charges.
- Belleville owns about 30 acres of vacant fully-serviced industrial property at the north-east part of the city. Brockville has over 100 acres available in John G. Broome Industrial Park and another couple of acres in Western Industrial Park. Loyalist Township has over 400 acres of vacant industrial property. Napanee has well over 1,000 acres of available industrial land. In comparison, Kingston has 152 net acres of available industrial land in four parks.

All told, the Kingston economy is well positioned relative to some of its closest competitors. Favourable transportation links, access to educational institutions and a relatively large and diversified labour force will all play to Kingston's advantage in attracting and retaining jobs. Relative to Ottawa, however, Kingston will continue to lag behind in terms of the attraction of major employers looking for an Eastern-Ontario location.

Kingston's prospective economic performance relative to the rest of eastern Ontario (less Ottawa), therefore will likely be relatively high.

## **2.4 EMPLOYMENT GROWTH PROSPECTS, 2002-2026**

Preliminary material from The City of Kingston's Urban Growth Strategy identifies three employment growth scenarios for the Kingston CMA over

the 2001-2026 period<sup>11</sup>. These three scenarios amount to annual job creation of 200 (low), 600 (medium) and 1,000 (high) jobs per year.

As pointed out in the J.L. Richards & Associates report, the vast majority of these jobs would likely be located within the City of Kingston. Given historical job creation patterns across the CMA, this assertion is reasonable.

The medium growth scenario in the preliminary material from the Urban Growth Strategy appears to be most consistent with the overall macroeconomic environment through to 2026. Assuming all 600 net new jobs per year anticipated by the medium scenario are located within the City of Kingston, consider:

- 600 jobs per year within the City of Kingston on a place of work basis amounts to a net 0.81 percent growth rate through to 2026<sup>12</sup>;
- This is about on par with expected growth nation wide (0.9 percent)<sup>13</sup>;
- This is somewhat below expected growth in Central Ontario (1.3 percent)<sup>14</sup>;
- But is somewhat above expected growth across the rest of Ontario (0.6 percent)<sup>15</sup>; and
- This is slightly above expected growth in the Eastern Ontario excluding Ottawa region (about 0.7 percent), consistent with recent performance<sup>16</sup>.

In the next chapter, more detail is presented on the composition of expected economic growth in Kingston, and its impact on land use demand.

<sup>11</sup> J.L. Richards & Associates Revised Interim Report No. 2 Evaluating the Growth Alternatives, (April, 2003). PP 10.

<sup>12</sup> That is, 67,290 jobs in 2001 and growth of 15,000 net new jobs (600 X 25 years) amounts to some 82,290 jobs in 2026 – 0.81% growth per year.

<sup>13</sup> Refer to Section 2.1.1.

<sup>14</sup> Refer to Section 2.1.3

<sup>15</sup> Refer to Section 2.1.3

<sup>16</sup> Refer to Section 2.1.4

### 3 EMPLOYMENT GROWTH PROSPECTS BY SECTOR

This section presents detailed projections of employment growth by sector in the City of Kingston through the period 2002-2026. It begins with an analysis of historical growth over the past six years by industrial sector.

#### 3.1 EMPLOYMENT GROWTH BY SECTOR, 1996-2002

Data from Census of Canada and the Business Registry Division at Statistics Canada were used to estimate the composition of job creation in the City of Kingston between 1996 and 2002. These data indicate the degree of economic restructuring that took place through this period in Kingston.

Between 1996 and 2002 employment (POW basis) in the City of Kingston advanced at about 1.2 percent per year<sup>17</sup>. Most sectors saw gains or had only small losses through this period (see Figure 4).

Figure 4

	1996 **	2002	Annual Change	
	Persons***	Persons***	Persons***	Percent
<b>Total Employment</b>	<b>63,240</b>	<b>67,960</b>	<b>790</b>	<b>1.2</b>
Industrial Park-Type Employment	32,340	39,890	1,260	3.6
<i>Heavy Manufacturing</i>	5,490	5,710	40	0.7
<i>Light Manufacturing</i>	3,400	2,320	-180	-6.2
<i>Warehouse/Distribution</i>	1,980	2,610	110	4.7
<i>Office (Regional Service)*</i>	11,420	13,470	340	2.8
<i>Health and Social Service *</i>	10,040	15,780	960	7.8
Other Employment	30,890	28,070	-470	-1.6
<i>Retail and Personal Services</i>	16,890	16,690	-30	-0.2
<i>Construction</i>	4,000	3,580	-70	-1.8
<i>Education Services</i>	9,940	7,710	-370	-4.2
<i>Agriculture/Natural Resources</i>	60	90	0	6.6

\* Only partial employment located in industrial parks \*\* Three former municipalities

\*\*\* All values rounded to 10

Source: Clayton Research based on data from Statistics Canada

Industrial park type employment advanced at about 3.6 percent per year – adding 1,260 net new jobs. This compared with other employment, which

<sup>17</sup> Note that growth was 1.3 per year percent between 1996 and then slowed in 2001-2002 for an overall growth rate of 1.2 percent – Refer back to Section 2.2.

includes retail (including accommodation, food and beverage, and other personal services), construction, education and agriculture, which declined over the period by about 1.6 percent or 470 positions per year.

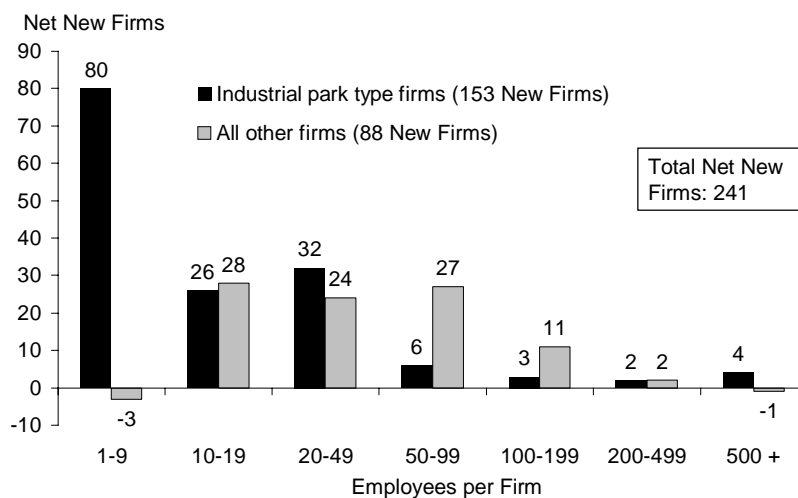
### 3.2 EMPLOYMENT GROWTH BY FIRM SIZE, 1996-2002

According to the Business Register data, there was substantial small and medium sized business creation in the 1996 to 2002 period. There were 241 net new employer firms (with at least one employee) established in the City of Kingston over this period (see Figure 5). Moreover, the composition of this business creation was heavily skewed toward industrial park type employment, with the net creation of 153 new firms within these sectors, and 88 net new firms among population-related industries.

Among industrial park type employers, the majority of the growth was among very small firms – mostly in the business services sector. Among population related sectors, the growth in firms was more broadly based, with a large increase amongst firms with 10-99 employees – primarily in the retail and hospitality sectors.

Figure 5

**Net New Firms\* by Employee Size Category, City of Kingston\*\*, 1996-2002**



\* Does not include indeterminate (self employed, other firms with no size category)

\*\* Sum of firms in the three former municipalities in 1996

Source: Clayton Research based on data from Statistics Canada, Business Register

### 3.3 KEY FACTORS BEHIND THE EMPLOYMENT FORECAST BY SECTOR

#### 3.3.1 Call Centres

Two of Kingston's largest private sector employers are call centres. StarTek employs 1,200 people and Bell Canada employs about 500 people.

Canada, in general, has been a popular destination for American firms looking to outsource their call centre operations. Factors in our favour include proximity to U.S. head offices, cultural similarities, a highly educated workforce, high rate of bilingualism, stable and advanced communication infrastructure, business-friendly attitude, favourable exchange rate (until recently) and Canada's economic stability. The number of outsourced call centres located in Canada is expected to increase from about 450 to 600 over the next four years. Employment in outsourced call centres could increase by over 50 percent over the same time period.<sup>18</sup> Despite such "offshoring" emerging as an election issue in the U.S., the strong economics driving Canadian call centre formation will continue to benefit centres such as Kingston.

Kingston is capitalizing on the continuing growth in call centres. One advantage is St. Lawrence College's call centre curriculum and on-the-job training program. Moreover, they have secured a targeted wage subsidy through Human Resources Development Canada and Ontario Works.

Kingston's large student population gives it a supply of part-time and shift workers. Kingston's extensive telecommunications infrastructure is based on a network that is 100% digital with high speed data services as well as ISDN<sup>19</sup>, ATM<sup>20</sup> and Centrex<sup>21</sup> in two wire centres.

On the other hand, Kingston, which ranks well below major call centre regions such as Montreal, Moncton, Ottawa, Sherbrooke and Sudbury<sup>22</sup> in

<sup>18</sup> Source: Datamonitor research firm, as reported in The Halifax Daily News, August 20, 2003, and in M2 Communications Ltd. August 12, 2003.

<sup>19</sup> ISDN: Integrated Services Digital Network (A digital telephone service that provides fast, accurate data transmission over existing copper telephone wiring)

<sup>20</sup> ATM: Asynchronous Transfer Mode (is a dedicated-connection switching technology that organizes digital data into 53-byte cell units and transmits them over a physical medium using digital signal technology)

<sup>21</sup> Centrex: A service that is functionally similar to a customer-premise PBX, but provided by means of equipment located in a Central Office. PBX: A Customer Premise Communication Switch used to connect customer telephones (and related equipment) to LEC central office lines (trunks), and to switch internal calls within the customer's telephone system

<sup>22</sup> All of which have bilingualism rates between 40 and 53 percent of the population.

terms of bilingualism, will remain at a disadvantage in terms of this key call-centre resource. At 13 percent of the population, Kingston's bilingualism rate ranks 13th amongst Canada's largest 46 cities, according to 2001 Census data.

### 3.3.2 Industrial and Warehouse/Distribution

**Heavy Manufacturing:** Employment in heavy industrial includes rubber, plastic and leather products; primary textile; fabricated metal products; machinery industries; transportation equipment; chemicals and other manufacturing. Heavy industry employed about 5,710 people in Kingston in 2002.

**Light Manufacturing:** Employment in light industrial industries includes food, beverage and tobacco products; electrical and electronic products; textiles and clothing; furniture and fixtures; paper and allied products; printing; publishing; electric and electronic products; transportation and other utility industries. The City of Kingston's employment in light industry declined by over 1,000 persons from 1996 to 2002, reaching 2,320 persons.

Alcan is in the process of acquiring a large aluminium manufacturing company based in France. If they successfully gain control of this company, it will not only increase significantly their international market share, but improve prospects at the local Kingston level as well.

**Warehousing:** There are also some 2,610 jobs in Kingston in the warehouse and distribution sector. This relatively land extensive industry requires lands with exceptional transportation links, and relatively large lots.

### 3.3.3 Office and Health Care

**Office:** A proportion of employment in office type jobs is located on industrial designated lands in Kingston. Many of these types of office jobs are related to regional service sectors, and include government services, amusement and recreational services, personal and household services, membership organization industries and other service industries, head offices, finance and insurance, business services, etc. The City of Kingston's employment in office-type jobs increased by some 2,040 persons from 1996 to 2002, reaching 13,470 persons.

**Health:** In addition, Kingston's health care sector employs about 15,780 persons. Health care clinics, labs and research facilities could be located

within industrial designated lands. There are solid prospects for these types of facilities within Kingston's health care sector through the forecast period. These facilities generally demand good frontage and access to business amenities.

Research and development is a particular aspect of regional service office that has considerable potential within the economic development realities in Kingston. Kingston currently has two large private sector employers who focus on research and development – Alcan and Dupont Canada, together employing about 550 people in 2002 – and many smaller private sector firms. Some of Kingston's public sector organizations are also involved in research, including the post-secondary institutions and hospitals. Public sector employment in research is not broken out from their total employment numbers.

Kingston does not currently promote a technology focused industrial or business park. This may, however, be an area in which to focus future economic development efforts. A successful science and technology park not only stimulates local employment creation (both directly and indirectly), but also promotes higher paying and more stable employment.

Kingston is in a position to further promote this type of development, leveraging off of its proximity to Ottawa's technology cluster, and the concentration of research initiatives at Queen's University. Even without a technology park per-se, it is likely that technology-type employment will be a growth area for Kingston.

### **3.4 EMPLOYMENT GROWTH FORECAST BY SECTOR, 2002-2026**

The projections of employment presented in this section consider the following components, discussed earlier in this report:

- Macroeconomic conditions in Canada and Ontario likely to influence the rate of employment growth over the projection period;
- Historical trends in the Kingston economy, in particular employment by industry;
- Major changes in industry segments and major employers over the past economic cycle, and the potential for economic development over the next 10-20 years; and
- Major economic development initiatives currently underway and proposed and a comparison to other jurisdictions.

Projections of employment by sector are presented in Figure 6 and are contrasted to the rates of growth by sector over the past six years. Key observations from this table include:

- Employment in sectors outside of industrial parks (labelled as 'Other Employment' on the table) has declined somewhat in the past five years, in part due to restructuring within the public education system, and with industry restructuring within the retail sector. Over the forecast period, however, recent declines in 'other' employment will reverse and a slow but positive rate of employment growth is expected;
- Industrial park type employment is likely to continue to account for a relatively large share of employment growth in Kingston through to 2026;
- There will be a modest degree of job creation amongst heavy manufacturing, although to a lesser extent than in the past period;

Figure 6

#### Employment Growth by Sector, Kingston, 1996\*-2026

	1996*- 2002	2002- 2026	1996*- 2002	2002- 2026
	<i>Persons (Annual Average Change**)</i>		<i>Percent Growth (Annual Average)</i>	
<b>Total Employment</b>	<b>790</b> <sup>1.</sup>	<b>600</b> <sup>2.</sup>	<b>1.2</b>	<b>0.8</b>
Industrial Park Type Employment	1,260	420	1.3	0.9
<i>Heavy Industry</i>	40	10	0.7	0.3
<i>Light Industry</i>	-180	20	-6.2	0.8
<i>Warehouse/Distribution</i>	110	20	4.7	0.8
<i>Office (Regional Service)*</i>	340	190	2.8	1.2
<i>Health and Social Service *</i>	960	180	7.8	1.0
Other Employment	-470	180	-1.6	0.6
<i>Retail and Personal Services</i>	-30	150	-0.2	0.8
<i>Construction</i>	-70	10	-1.8	0.3
<i>Education</i>	-370	20	-4.2	0.3
<i>Agriculture/Natural Resources</i>	0	0	6.6	-1.0

1. See Figure 4; 2. See Section 2.4      \* Three former municipalities \*\* All values rounded to 10

Source: Clayton Research based on data from Statistics Canada

- Jobs in light manufacturing have suffered somewhat in the past few years, but this area is poised to improve considerably through the forecast, and contribute about 20 jobs per year;

- Warehouse and distribution employment will also show modest growth through the forecast period, keeping pace with overall business growth;
- Office type jobs will advance the fastest through the forecast period in response to specific economic development efforts, and in conjunction with province wide trends toward greater focus on office type and service sector jobs;
- Health care and social service jobs will also likely advance at an above average pace through the forecast period. These jobs include a component of population related jobs – particularly ones focused on care for the aging population – and based on the increasing importance of health related laboratories and research facilities;
- Retail and personal services jobs have declined modestly since 1996, but are poised to improve through the forecast period as the needs of the local population expand, and in conjunction with province wide trends toward personal services jobs;
- Employment in construction will under-perform the overall average employment growth, but will likely return to modest positive territory matching growth in population. Natural resources and agricultural employment, which is very low within the City of Kingston, will likely show a modest decline with continued advances in agricultural productivity, along side some modest depletion of agricultural lands within the City; and
- Employment in education, which includes the public school system private education and Kingston’s post secondary institutions, had declined somewhat in the past several years due primarily to restructuring in the public system. Jobs in this sector are expected to improve modestly through the forecast period as the population expands.

---

## 4 KINGSTON'S INDUSTRIAL LAND STRUCTURE

---

Kingston's industrial areas accommodate a range of businesses and land uses including heavy industrial, light industrial (manufacturing) and warehousing and distribution. In addition, a variety of limited and unserved industrial uses, such as open storage, are located in un-served industrial areas. Further, a variety of commercial office-type activities locate in industrial areas as a result of favourable land values and site characteristics such as visibility, access and surrounding uses. Kingston's industrial parks allow office-type employment but generally restrict retail and personal services.

There is a strong clustering of industrial land use applications around transportation links. Historically, these have included rail links, but increasingly it is access to Highway 401 which is the primary driver of industrial demand. Transportation driving time to other centres is an important factor.

Industrial land supply and demand is a complex dynamic affected by a number of constraining factors which makes the task of strategizing a fit between the two challenging. This is in contrast to residential analysis that is more predictable in its population growth forecasts, year-to-year absorption, the uses to which residential land can be put, and the subsequent provision of land supply.

According to assessment records there are approximately 3,090 acres of both occupied and vacant industrial land in the urban portion of Kingston which falls into four principal categories:

- City-owned vacant industrial lands, which are primarily located in four City-owned industrial parks (152 net acres);
- City-owned vacant un-served lands adjacent to existing City-owned parks with potential for expansion (431 gross acres);
- Private lands within the City-owned parks (714 net acres);
- Private lands elsewhere in the city which are designated and/or zoned for industrial land use; and
- There are additional lands designated industrial in the rural portion of the City. Although important locally these lands do not offer the same business opportunities as the lands in the urban portion of the City. They include aggregate extraction areas and utility corridors.

Some critical lands at 401 interchanges have been designated industrial. Despite excellent access, the un-serviced nature of these lands limits their potential.

The focus of this study is on the potential absorption of existing lands within the urban portion of Kingston, primarily the City-owned lands within four existing industrial parks, that is the first two bullets above.

## **4.1 CITY-OWNED INDUSTRIAL PARKS**

There is a history in Kingston of municipal participation in industrial land promotion and development. Most of the current City-owned lands originated from land assembly initiatives which date back to the 1960s, and have been continually pursued since. The City owns important parcels of land in logical areas for extension of existing industrial areas. The City clearly has a dominant position in the industrial land development business in Kingston.

There are four City-owned industrial parks in Kingston. Each park is illustrated on Map 1 in the appendix:

- Cataraqui Industrial Estates
- Joseph P. Clyde / Kingston New Industrial Park (Clyde)
- Alcan Industrial Park
- St. Lawrence Industrial Park

In addition, the City is assembling lands near to the airport, which could ultimately provide a fifth modest sized industrial park.

The key to the suitability of these parks to address the industrial land needs over the planning period rests in their abilities to meet Kingston's economic development needs. The land use within these parks is amazingly consistent with few intrusions or incompatibilities. However, the mixing of land use already evident in some parks and likely to progress as more commercial uses are introduced into traditional industrial parks will pose a challenge to the overall industrial structure.

There are some periphery industrial lands that are under pressure to convert to commercial and retail uses. For example, lands along Gardiners Rd. south of Cataraqui Industrial Estates have seen the introduction of significant retail uses.

Each industrial area has a unique character, affecting its suitability for future development. The suitability of the City-owned parks to meet Kingston's industrial needs over the period 2002-2026 depends on the availability of sufficient lands to meet anticipated employment growth, the suitability of those lands to the type of industries most likely to develop and the adequacy of the servicing available.

**Cataraqui Industrial Estates** is designated for general industrial activities including: manufacturing and assembling operations, processing plants, warehousing and distribution facilities, and business and professional offices. The park's zoning designation is M6 (General Industrial). Cataraqui's major 401 interchange is Gardiners Rd. and it is located on the west side of the city. Total acreage of this park is 699 acres, and lot sizes range from 0.6 to 25 acres. The City retains only 52 acres of serviced vacant land with strong recent sales.

Cataraqui's location in the faster-growing west-end of Kingston provides it an advantage over other industrial areas. There are only relatively small lots remaining available from presently serviced lands, but there remains some 250 acres (gross) ready for development in the area immediately to the east. These lands have ready access to two interchanges with the 401 and offer direct access to Kingston's central business district. The zoning of this park is broad. This park is most suitable for light industrial and heavy industrial uses due to its zoning and location.

Extensive land uses such as transport terminals and construction storage yards in the area could be redeveloped in the future to more intensive business uses. These lands are also suitable for office uses, and are viewed favourably by present office type employers. The park's proximity to neighbouring residential areas and other amenities is valued.

**Alcan Business Park** is centrally located in Kingston, with reasonable access to Highway 401. The adjacent lands also designated industrial represent expansion opportunities as this park develops. The park is located on the south side of Counter St., east of Sir John A. Macdonald Blvd. Alcan has been designated for mixed-use business activities such as research and development laboratories, light manufacturing and assembly facilities, corporate and professional offices and data processing facilities. It has a M9 (Business Park) zoning. Total acreage is approximately 25 acres with individual lot sizes ranging from 1.5 to 2.25 acres. Much of this land has been sold. The City retains 3 vacant parcels totalling 5.9 acres.

**Joseph P. Clyde / Kingston New Industrial Park (Clyde)** is designated for mixed industrial uses, such as manufacturing and assembly operations, laboratories, processing plants, distribution plants, trucking or freight terminals, warehousing, and wholesale businesses. Its zoning is coded M Industrial. It is comprised of three very distinct areas created by the rail and road corridors. The north west corner is the newest and has a high proportion of “clean” industry with little outside storage. Hotels and fast food establishments on Division St. are part of this park. The presence of the high school at the entrance sets a high standard for this area. The area north of the rail corridor between Sir John A. Macdonald Blvd. and Division Street is older and more diverse. There are several large vacant parcels at each side which represent important development along Division Street and have created a mixed use or transitional zone showing signs of redevelopment. The park is bisected by a Provincially Significant Wetland.

The Counter Street corridor is dominated by utility transportation yards and recycling uses. It is centrally located, close to Highway 401 via Sir John A Macdonald Blvd and has a total size of 560 acres. Individual lot sizes range from 0.67 to 8.25 acres.

Clyde is well positioned in terms of surface transportation links. The park spans two interchanges to Highway 401 and is bisected by the main CNR rail corridor through Kingston and is serviced by an active railway spur line. This configuration lends itself to mixed use facilities ranging from business services to warehousing and distribution. Space limitations and land use conflicts limit the ability of this park to accommodate heavy industrial users. Clyde is almost fully built-out at present. There are very few vacant City-owned lots available.

**St. Lawrence Business Park** located in the former Pittsburgh Township has been designed to attract business and research operations such as research and development laboratories, data processing operations, light manufacturing and assembly operations, business/professional offices and medical clinics and laboratories, financial institutions and commercial schools and technical training facilities. Its zoning designation is BP (Business Park). The park is located in a somewhat remote area of Kingston, on Highway 15, towards Highway 401 east of the Cataraqui River. The St. Lawrence Business Park amounts to approximately 88 acres with an additional 178 acres of adjacent City-owned lands and individual lot sizes range from 0.5 to 9.6 acres each.

Although one of the best designed parks in Kingston, and with relatively good access to Highway 401 via Highway 15, St. Lawrence Business Park suffers from a relatively isolated location from transportation links within the urban area valued by light industrial and distribution tenants and from the urban core area amenities valued by office tenants. Ultimately, future growth in nearby support services and improved transportation linkages could see this park flourish.

## 4.2 RECENT DEVELOPMENT

The industrial (manufacturing and warehouse/distribution) employment situation in the City of Kingston was weak during the 1996 to 2002 period, with a decline of about 240 jobs, or 40 jobs<sup>23</sup> per year on average (recall Figure 4). During this same time period, Kingston had over \$60 million in industrial building permits. This implied a modest amount of new construction in the industrial sector, amounting to roughly 540,000 square feet (or an average of 90,000 sq. ft. per year). (Note that these figures likely overstate the actual net increase in industrial space as data on demolitions and the breakdown in permits between new construction and additions/alterations are not readily available). In part this reflects the creation of 24 new industrial firms (net of dissolutions) at the same time as average employment levels in many existing firms declined.

The bulk of the growth in recent years has been among office type development. Office type job growth was over 340 persons per year between 1996 and 2002 (2,040 persons in total) and commercial building permits, much of which would be for office amounted to about \$150 million. Some of this office development has been within the City-owned industrial parks.

Over the period 1999 and 2002, the City of Kingston and the Kingston Economic Development Corporation oversaw the sale of about 66 acres of industrial land (an average of 16.4 acres per year). Sales of privately owned land were unavailable as are sales of lands overseen by KEDCO's predecessor, The Kingston Area Economic Development Corporation (KAEDC). While these data are obviously less than complete, nevertheless they do illustrate modest growth in the industrial land sector even through a period of relatively weak and unsteady employment growth.

<sup>23</sup> All employment numbers in this section rounded to the nearest 10.

### 4.3 LAND ABSORPTION BY SECTOR

New employment growth is related to anticipated new land absorption. Land absorption, however, varies considerably from sector to sector. In Kingston, the sectors which are likely to account for the greatest proportion of growth through the planning period are those sectors with the highest land densities. This will have a mitigating effect on land needs through the 2002-2026 period.

Figure 7 illustrates average coverage ratios derived from a combination of a survey of existing Kingston industrial park users and industry standards. In total densities from about 20 large industrial park users in Kingston from across all sectors were surveyed for densities to develop these data.

As is clear from this distribution, land needs in an economy which is transitioning toward office-oriented jobs are considerably lower than in an economy dependent on traditional industries.

Figure 7

<b>Typical Employment Land Densities by Sector City of Kingston</b>		
<u>Sector</u>	<u>Workers per Acre*</u>	<u>Acres* per 100 Workers</u>
Heavy Industry	4.4	23.0
Light Industry	19.4	5.2
Warehouse/Distribution	6.2	16.1
Office	94.7	1.1
Health Care	60.1	1.7

\* Net acres, figures rounded to one decimal place  
Source: Clayton Research

Across the anticipated employment growth distribution, these values imply net land absorption rates of about 23 workers per net acre. These are consistent with estimates employed by the Urban Growth Study<sup>24</sup> of 24 workers per net acre.

### 4.4 LAND REQUIREMENTS

The Clayton Research industrial land requirements model uses employment forecasts by sector, employment densities by sector and anticipated capture rates on industrial zoned lands.

<sup>24</sup> J.L. Richards & Associates Revised Interim Report No. 2 Evaluating the Growth Alternatives, (April, 2003). PP. 14

Net job creation in heavy industrial, light industrial, warehouse and distribution are assumed to all take place on industrial zoned lands. In addition a component of commercial office-type employment is also expected to locate on industrial lands, with the remainder locating in commercial nodes, including the central business district, and special lands such as federally owned lands and other large land holdings.

Based on a combination of the current distribution of regional service office type employment in Kingston, and the anticipated pattern given trends in economic development, this report assumes that about 75 percent of the anticipated office-type employment growth and about 20 percent of the anticipated health and social services employment growth in Kingston will be located within industrial zoned lands.

Based on employment projections set out earlier in Section 2.4, Figure 8 presents the potential industrial park land absorption in Kingston through 2002-2026. In total, some 267 net acres (108 net hectares) of land absorption can be expected among industrial zoned lands.

Figure 8

---

#### Industrial Park Land Absorption by Sector, City of Kingston, 2002-2026

	Total Employment Growth <i>Persons**</i>	% on Industrial Lands <i>Percent</i>	Employment Growth on Industrial Lands <i>Persons**</i>	Workers Per Acre* <i>Persons***</i>	Net Land Demand <i>Acres*</i>
Industrial Park Type Employment					
<i>Heavy Industry</i>	350	100	350	4.4	80
<i>Light Industry</i>	460	100	460	19.4	24
<i>Warehouse/Distribution</i>	550	100	550	6.2	88
<i>Office (Regional Service)*</i>	4,510	75	3,380	94.7	36
<i>Health and Social Service *</i>	4,260	20	850	60.1	14
Other Employment					
<i>Retail and Personal Services</i>	3,520	0	-	-	-
<i>Construction</i>	270	0	-	-	-
<i>Education</i>	530	0	-	-	-
<i>Agriculture/Natural Resource</i>	-20	0	-	-	-
Total, Industrial Park Type	14,430 <sup>1.</sup>		5,590	23	242
Contingency (10%)					24
<b>Total Land Needs</b>					<b>267</b>

1. See Figure 6 - Annual average 600 persons

\* Net acres \*\* Figures rounded to nearest 10 \*\*\* Figures rounded to one decimal place

Source: Clayton Research

---

#### 4.4.1 Planning Ranges

While this analysis suggests that industrial land absorption in Kingston is likely to amount to 267 net acres over the next 24 years, this estimate is somewhat sensitive to underlying growth assumptions. Prudent planning practices ought to take into account the probability that underlying growth patterns may play out differently than anticipated, leading ultimately to industrial land demand in Kingston higher or lower than the 267 net acres anticipated. For example:

- Underlying economic growth in Kingston could turn in a stronger than anticipated performance. KEDCO, for example, has set an ambitious target for job creation between 2003 and 2010 of about 2.7 percent growth<sup>25</sup> – which is considerably higher than roughly 1.0 percent growth for this sub-period that is incorporated into the projections of this report. Under that circumstance, industrial park type employment would be stronger than presented here, and so would industrial land needs.
- Moreover, the industrial land needs estimate in this report also relies on a certain distribution of employment. If job growth patterns turn out to be more heavily focused on more land extensive activities such as manufacturing or distribution, and less on intensive sectors such as research and development and regional service office then industrial land needs could also be higher.
- Alternatively, it is possible that economic growth through the planning period in Kingston could significantly understate the estimates used in this report. The existence of another very sharp early-1990s style recession in the period could significantly derail many industries in Kingston leading to years of recovery. Under these circumstances, net industrial land absorption over the planning period could well be significantly lower than the 267 acres anticipated.

#### 4.4.2 Planning Strategy

In either event, prudent planning principles suggest targeting policies which bring forth a sufficient supply of land to meet the projected demand, while keeping options open to accelerate or decelerate those policies if events dictate, while not over-investing in land and infrastructure at too early a juncture exposing the City to undue risks.

<sup>25</sup> KEDCO, (2003). PP. 31 – calculated from target of 12,000 new jobs on a base of 69,161

## 4.5 LAND ABSORPTION BY INDUSTRIAL AREA

The land supply analysis relied upon recent assessment data assembled and organized by the GIS Section of the City's Planning Division. The assessment data is produced and maintained for municipal property taxation purposes. It provides information on lot area and land use by assessed property.

The GIS Section produced a map of all industrially assessed properties in the city. A portion of this map is reproduced as Map 1 in the appendix. The industrially-assessed properties have been divided into two categories, namely vacant industrial properties and all other (occupied) industrial properties.

The GIS Section also provided a listing of all assessed properties within areas designated in the three Official Plans as industrial. Site inspections were conducted to verify the land use information. These areas are outlined on Figure 9. The corresponding Area Identification letters are shown on the map in the appendix.

Finally field visits were made to each area to update the land use information and verify the nature and type of development. The map, and the data presented in Figure 9 also represent the extent of vacant City-owned land in each industrial park as derived from the assessment information and the site visits.

Within Kingston's City-owned parks there currently exists some 152 net acres of serviced, City-owned vacant land available for sale through KEDCO's industrial land sales program. In addition there is some 491 gross acres (or 393 potential net acres) of un-serviced lands adjacent to existing industrial parks under city ownership which could also serve to accommodate future growth.

Three facts are clear from this analysis:

- There is an insufficient supply of serviced City-owned industrial park lands to meet the longer-term land demands;
- Including City-owned un-serviced lands adjacent to existing parks, there appears to be an adequate supply of lands within the confines of the present City-owned parks and their adjacent territories; and
- Although privately held lands could participate, experience suggests they will only develop based upon the interests and objectives of the

owners. In other words, their development is unlikely and cannot be relied upon to advance the City's economic objectives.

Figure 9

<b>Summary of Land Inventory, Kingston, 2003</b>					
Industrial Area	Total * Industrial Lands	Private Lands		City-Owned Land Inventory	
		Assessed Occupied	Assessed Vacant <i>Net Acres</i>	Vacant Served	Vacant Un-Served
<b>Cataraqui Industrial Estates</b>					
Current park boundary	196	79	75	42	-
Adjacent lands **	403	65	135	-	203
<b>Clyde/Kingston New Industrial Park</b>					
Current park boundary	559	407	122	30	-
Adjacent lands **	48	-	-	-	48
<b>Alcan Business Park</b>					
Current park boundary	23	12	5	6	-
<b>St. Lawrence Business Park</b>					
Current park boundary	88	15	-	73	-
Adjacent lands **	142	-	-	-	142
<b>In Parks</b>	867	513	202	152	-
<b>Adjacent Lands</b>	593	65	135	-	393
<b>Total City-Owned Park-Based Inventory</b>					<b>545</b>
<b>Other Industrial Lands</b>					
Wilton (Area A)	66	34	33	-	-
Airport (Area B)	22	12	-	10	-
Sydenham (Area D1)	45	28	17	-	-
City Centre (Area F)	51	47	4	-	-
Alcan	399	133	266	-	-
Counter (Area G3)	31	-	31	-	-
Montreal St (Area H)	202	125	63	15	-
Nordex (Area I)	196	143	53	-	-
Arlington Park (Area J)	140	118	21	-	-
Dupont (Area K)	319	315	4	-	-
MacAdoo (Area L)	9	9	-	-	-
<b>Sub-total</b>	1,480	965	491	25	-
<b>Grand Total Kingston Lands</b>	2,940	1,542	828	177	393
<b>Total City-Owned Inventory, 2003</b>					<b>570</b>

\* Lands with industrial designation \*\* Converted to net acres assuming 80% coverage  
Source: Clark Consulting Services based on data from City of Kingston

Not all of the available land is sufficient for each of the intended uses.

Figure 10 presents a potential allocation of Kingston's land requirements 2002-2026 into City-owned parks based, in part, on market factors, and the governing criteria and zoning for each park.

The allocations of demand into the various parks presented in Figure 10 are based on a combination of potential market forces, land use restrictions and other factors.

Some obvious cautions present themselves based on the analysis in Figure 10. Although in the macro view, there are sufficient available lands to meet demand, some actions are required to meet the pattern of demand anticipated. Specifically:

Figure 10

**Industrial Land Demand and Industrial Park Capacity, 2002-2026**

Sector	Clyde/King- ston New Industrial Park	Cataraqi Industrial Estates	Alcan Business Park	St. Lawrence Business Park	Total
	<i>Net Acres</i>				
Heavy Manufacturing	7	81			88
Light Manufacturing	6	10		10	26
Warehouse/Distribution	15	67		15	97
75 % of Office	10	10	6	13	39
20 % of Health Care	5	9		2	16
Total Land Demand	43	177	6	40	266
Vacant Serviced Land	30	42	6	73	152
Vacant Unserviced Land	48	203		142	393
City-Owned Inventory, 2003	78	245	6	216	545
City-Owned Inventory, 2026	35	68	0	176	279

Source: Clayton Research and Clark Consulting Services

- While there is a large quantity of land available in and around the **St. Lawrence Business Park**, this park is likely to attract a relatively small share of the net land demand over the planning period. While the park is attractive, its relative isolation from amenities and key transportation links places it at a long-term disadvantage. This park is likely to account for only a small amount (approximately 15 percent) of the potential demand;
- **Alcan Business Park** has only a few City-owned acres available for sale, and its usage is basically restricted to office development. This park would likely attract more demand if additional Alcan lands were positioned for redevelopment;
- While there appears to be a fair supply of land remaining in **Clyde Industrial Park**, the lands under City control are somewhat limited due to either their remote locations, their limited size, their neighbouring uses or in the case of the lands found on Sir John A. Macdonald Boulevard, the restrictive planning regulations; and
- **Cataraqi Industrial Estates** is expected to attract the largest proportion of land demand over the planning period – about two-thirds of all demand – due to a combination of available and attractive lands, a location with key transportation links, including ready access to Highway 401 and its positioning within the higher-growth west end of the city. However, most of the required land supply within Cataraqi remains tied up in unserviced parcels. A key to facilitating the type of demand anticipated for this industrial park

will be the timely preparation of the land parcels in the adjacent territory.

In addition to city-owned lands in the established parks and adjacent areas, there are lands available in two other locations in Kingston – including about 10 acres of serviced land at the airport site, and about 15 acres of serviced parcels along Montreal St. The airport lands will likely attract some demand in niche applications such as courier, distribution or aviation-technology focused industries. The Montreal St. lands are located in an established transportation corridor that makes it difficult to determine the extent and usefulness of the parcels.

## 5 CONCLUSIONS FOR CITY-OWNED INDUSTRIAL LANDS

---

Interviews and analysis undertaken during the course of this study suggest the following conclusions:

- The City of Kingston and KEDCO, as its marketing agent, have been successful in luring industry into Kingston. The City has an opportunity for continued growth through the 2026 planning horizon based on its chosen promotional directions and target markets.
- Job growth will have a direct impact on the quantity of additional industrial land needs. In addition, the type of employment will determine the amount and type of land required.
- Recent rapid development of industrial lands is leading to a situation in which the supply of available serviced industrial properties is becoming limited in key industrial areas, and should be addressed.<sup>26</sup>
- In particular, the Cataraqui Business Park is experiencing rapid growth. The City owns significant vacant industrially designated lands immediately adjacent to this park. A strategic development plan should be prepared. This plan should examine the servicing and development alternatives for the park with a view to preparing an overall development plan for the lands together between Gardiners Road and Sydenham Road. In this way phasing and service design can be coordinated. Adjacent owners should be consulted to encourage their participation. This item warrants early attention to ensure adequate budget is assigned during this fiscal year.
- The City maintains a significant inventory of vacant industrial properties with a wide range of permitted uses. The City's industrial parks in conjunction with adjacent lands provide an adequate supply of business park type lands through the planning horizon to the year 2026, if developed in a strategic manner to provide a range of industrial uses.
- Additional lands related to significant land-holders such as Alcan and Dupont could also play a role in promoting these market trends. In particular the possibility of a technology focussed industrial or business park should be explored with the relevant stake holders.








<sup>26</sup> More detailed suggestions are proposed as a component of the second phase of this study.

- Analysis suggests that there are a range of possible future development opportunities which the City should explore. It would be advantageous and advisable for the City to look strategically at the adjacent land holdings which they own. Map 1 illustrates these adjacent lands. The City ought to maintain its ongoing role in the ownership and development of industrial lands. The transfer of these lands to another agency for marketing and sale is a matter to be addressed as part of an ongoing economic development function.
- The City has an ongoing role to play in the maintenance and servicing of industrial lands. This in part is based upon the extensive history of the City in the development of industrial and business parks. Also the need to maintain flexibility and opportunities for future development would suggest that it would be prudent for the municipality to maintain ownership particularly of the further development opportunities on adjacent lands.
- There may be an on-going role for private industrial land holdings in Kingston. They presently play a part in the ongoing industrial and business activity in the City and its region. The municipality, once it has sold vacant land to industrial and business interests, then relies upon the private sector to make these lands available to others through sale or redevelopment. In view of the municipality's substantial holdings, neither the municipality's position nor the marketability of these lands are necessarily affected by the private holdings. However the municipality's position in the industrial land market will place increasing stress upon large industrial holdings to convert to other forms of land use. This is a matter which needs to be addressed in planning policy.

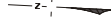
# Appendix

# Map 1 Industrial Lands City of Kingston

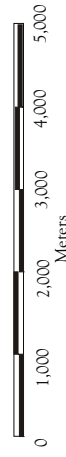
## Legend

-  Industrial Parks
-  Vacant City Owned Industrial Lands
-  Industrial Designation
-  Vacant Industrial Properties
-  All other Industrial Properties
-  Adjacent City Owned Lands
-  Adjacent Lands

AI Area ID



Scale:



Assessed Land Use  
derived from the Municipal Property  
Assessment Corporation  
(MPAC) 2nd Quarter 2003 data set



Planning Department



30 North Street  
Port Hope, ON  
Canada L1A 1T6  
tel: 905-885-8023  
toll free: 888-857-8619  
fax: 905-885-4785

Date: January 5, 2004

File: 787-Industrial Lands

