



The Planning Partnership



EMPLOYMENT LAND STRATEGY

CITY OF GREATER SUDBURY
JULY 2022





July 15, 2022

To: Melissa Riou, MAES, MCIP, RPP
Senior Planner – Community and Strategic Planning
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Re: City of Greater Sudbury Employment Land Strategy

Cushman & Wakefield has partnered with metroeconomics, The Planning Partnership, SCS Consulting Group, NPG Planning Solutions, and Altus Group, to complete this Employment Land Strategy, on behalf of the City of Greater Sudbury.

The Consultant Team is appreciative of input from City staff, as well as the many stakeholders that have helped to inform this work. We are confident that these analysis and strategic recommendations will help position the City to attract future growth and to seize opportunities for employment land development.

Respectfully submitted,

Cushman & Wakefield

A handwritten signature in black ink, appearing to read "Andrew Browning".

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EXECUTIVE SUMMARY

Introduction

In May 2020, the City of Greater Sudbury engaged a multi-disciplinary Consultant Team to undertake this Employment Land Strategy. Cushman & Wakefield is the lead firm, supported by sub-consultant firms metroeconomics, The Planning Partnership, SCS Consulting Group, NPG Planning Solutions, and Altus Group. These professionals are experts across a range of disciplines including real estate market analysis, land use economics, economic forecasting, planning policy and strategy, engineering, and municipal finance.

This Consultant Team has been formed to address the main goals of the project, which are:

- To improve the city's economic competitiveness and encourage the development of employment land;
- To ensure that the Employment Land Strategy, policies, and incentives, support projected economic growth and development; and,
- To maintain an employment land inventory by applying a planning methodology that promotes the provision of an appropriate land supply.

In addition to these goals, our work explores engineering-related and municipal finance-related issues, along with matters related to land economics and industrial and commercial real estate.

In the initial phase of this study, the Consultant Team reviewed a number of background documents. These included previous studies related to employment lands within the city, as well as planning policy documents, engineering-related reports, and those focused on municipal finance. Although some of the prior employment lands-related work that has been completed is now considered dated (circa early 2010s), a number of the conclusions and recommendations that are identified remain valid in today's environment.

Land Supply Analysis

Overview

The Consultant Team used Geographic Information Systems (GIS) data provided by City staff to identify the inventory of employment lands city-wide – both occupied sites (those with one or more buildings), as well as vacant sites (undeveloped land). The employment land inventory is focused on properties within the Settlement Areas across Greater Sudbury. While there may be future employment generated on lands identified as Mining/Mineral Reserve, Aggregate Reserve, and Agricultural Reserve, this Employment Land Strategy is focused on Industrial, Commercial, and Institutional land requirements.

Industrial

There is a vacant industrial land inventory of over 830 gross hectares across 150 individual sites within the Settlement Areas that comprise Greater Sudbury. These vacant lands are distributed across the two types of Official Plan categories of industrial land as follows: General Industrial (783 gross hectares – 94% share of all vacant Industrial-designated land), and Heavy Industrial (49 gross hectares – 6% share of total). Together, the three Settlement Areas of Sudbury, Garson, and Lively account for 80% of the City's total Industrial-designated lands, and 57% of the vacant land supply. In terms of parcel size, just over 70% of the vacant General Industrial-designated industrial parcels are less than 2 hectares in size (and 60% are less than 1 hectare), meaning that there is a limited range of site selection options for users seeking a large site for development.

At an aggregate level, there is a considerable supply of remaining undeveloped, designated industrial lands across Greater Sudbury. However, the location, size, and servicing status of these lands must be considered in assessing their capacity to be absorbed over time. As well, there are existing occupied lands which may represent opportunities for intensification, or potentially redevelopment.

Commercial

The Consultant Team has identified a vacant commercial land inventory of some 340 gross hectares across nearly 160 individual sites. These vacant lands are distributed across the three types of Official Plan categories of commercial land as follows: Mixed Use Commercial (326 gross hectares – a 96% share of all vacant Commercial-designated land), Town Centre (just over 12 hectares, 4% share), and Regional Centre (1 gross hectare, <1% share).

Sudbury is home to 80% of the overall Commercial-designated land supply, and nearly 90% of the vacant Commercially-designated lands in the city. Valley East (nearly 18 hectares, 5% share of vacant commercial land supply) and Lively (nearly 11 hectares, 3% share) also contribute to opportunities for future commercial development in Greater Sudbury. The remaining Settlement Areas have only limited commercial lands.

While there is an identified supply of nearly 340 hectares of Commercially-designated lands city-wide – almost half of which is serviced – there are limitations to the development prospects for a portion of this supply. The vast majority of these vacant lands are Mixed Use Commercial, meaning that the Regional Centre designation has only a limited extent of vacant lands. However, there may be considerable potential to intensify some existing large sites, as well as redevelop under-performing properties over time.

Institutional

In reviewing the large land holdings of Laurentian University, Cambrian College, and Collège Boréal, all three sites offer excess lands that would be suited to accommodate future institutional and related development. In contrast, one of the city's other large institutional sites – Health Sciences North, located at Paris Street and Ramsey Lake Road – appears to have limited capacity for expansion.

The Consultant Team has observed that the city has no vacant (undeveloped) land specifically designated as Institutional to accommodate future needs – although certain Official Plan designations (such as Living Areas, where such uses are compatible with the residential function of neighbourhoods; Mixed Use Commercial; Regional Centres; Town Centres; and Downtown) permit institutional uses.

Downtown

There is a vacant land inventory of some 10 gross hectares across 79 individual sites in the Downtown. Of these sites, 50 are surface parking lots. In general, the vacant Downtown lands are very small parcels – 70 of the 79 sites are less than one-quarter of a hectare. While there are certainly sites that have the potential for future development, parking needs will have to be addressed, and it may be necessary to assemble multiple parcels (occupied and vacant) in order to execute a significant development/redevelopment project.

Trends Analysis

Office

An important factor when contemplating the amount of future lands required to accommodate long-term office space demand is the densification of office space. This is a reference to the changing office workplace environment, which (pre-COVID-19) had been seeing a persisting trend towards smaller allocations of space per employee. This was driven by several factors, including more efficient building design, higher occupancy costs, and increased adoption of technology.

Post-pandemic, opportunities for knowledge spillover, innovation and creativity, employee bonding, culture/brand, mentoring and training, productivity, and more, are reasons that office real estate will continue to play a vital role in the way organizations work and grow. Ultimately, office workplace and market demand dynamics will evolve as a result of the crisis.

Industrial

Demand for the conversion of lands within designated employment areas to other uses is an ongoing issue faced by many municipalities. The nature of employment continues to evolve away from a historic manufacturing base to a more service-based economy. In permitting the conversion of employment lands to a non-employment use, these lands are highly unlikely to revert in the future back to an employment use; they are “lost” forever. A municipality must carefully weigh the benefits and drawbacks of any proposed industrial land use conversion in order to maintain/preserve sufficient lands to accommodate anticipated long-term industrial employment demand. Municipalities should encourage a range of parcel sizes, locations, and timing/levels of servicing of employment lands, in order to be responsive to occupier and developer requirements.

Longer-term, COVID-19 is accelerating the shift to eCommerce out of necessity. That may induce some longer-lasting behaviors in consumers. We expect the industrial-logistics sector to come out of this crisis stronger than ever. The pandemic may lead to an increase in domestic production of “mission-critical” things – particularly linked to the health care sector. Improved supply chains are also identified as an area for future improvement.

Retail

The retail sector is a constantly evolving business, with changing store formats, shopping centre formats, anchor tenant brands, and consumer behaviour. In Greater Sudbury, among the largest shopping centres in the market today are some of the newest additions, by year opened (SmartCentres Sudbury [2010], Silver Hills Centre [2009], and RioCan Centre Sudbury [1999]) – all power centre-format developments. Notably, some of the city’s largest shopping centres are also among its oldest retail-commercial stock (New Sudbury Centre [1957] and Rainbow Centre Mall [1971]). Among Greater Sudbury’s 22 largest shopping centres, 45% of the inventory was built during the 1970s and 1980s, and close to one-third was added from 1999-2010.

The most pressing current trends impacting retail real estate relate to the rapid adoption of eCommerce and the transfer of shopping centre sales to the online marketplace. This is linked with an associated decline of store sizes, as retailers adapt to evolving conditions. The outlook for Greater Sudbury is a likely decline in the amount of physical shopping centre space per capita over time, along with the closure of under-performing store locations.

Shopping centres are commonly a focal point and entrenched element of a neighbourhood/community, and they are invariably well located. In the future, there may be an opportunity to transform some of these more distressed assets into mixed use redevelopment sites combining retail-commercial space with other uses, including residential.

The COVID-19 crisis has had an immediate and profound impact on the retail sector, with many “non-essential” businesses suffering from a dramatic loss of income. The transition to online sales will accelerate even faster than the pace it had been on pre-pandemic, and is probably the single biggest factor with respect to long-term demand for retail real estate. Sadly, there will be long-lasting/permanent effects for some businesses, with store closures and bankruptcies appearing inevitable (of course, some businesses were already at a critical tipping point pre-downturn).

Population and Employment Projections

In 2018, Hemson Consulting Ltd. provided the City of Greater Sudbury with a projection of population and employment growth in a report entitled Outlook for Growth to 2046. These forecasts are used in the City’s Development Charge Background Study, and City staff directed the Consultant Team to rely on these figures for the purposes of this Employment Land Strategy. Notwithstanding that these projections predate the COVID-19 crisis – the lasting impacts of which are still not fully understood – the Consultant Team is of the view that the long-term nature of these forecasts means that they can still be relied upon for growth management purposes.

Hemson developed three forecast scenarios: a Reference Scenario – which is considered the baseline projection – and Low and High Scenarios which adjust growth assumptions to provide a broader range of outcomes. These projections have been adopted by the Consultant Team.

- The City of Greater Sudbury had a population of 166,130 in 2016. Based on Hemson’s projections, the city’s population in 2046 may range from a low of 165,090 (Low Scenario), to a mid-range total of 172,990 (Reference Scenario), or even to a high of 181,290 (High Scenario), should economic conditions and migration to the city – notably by young adults – significantly change.
- The City of Greater Sudbury had total employment of 79,440 jobs in 2016. According to Hemson’s outlook, by 2046, total employment could grow modestly to 81,230 (Low Scenario), increase to 85,750 (Reference Scenario), or possibly as high as 90,460 jobs (High Scenario).

Land Demand Analysis

Overview

The employment projection presented above can be translated into a forecast of land needs by identifying the type of buildings that are required for each category of employment (to accommodate industrial, office, and institutional-type employment), and using an employment density figure for each building type to convert anticipated job growth into employment land demand. Retail-commercial land needs are guided by population growth and assumptions related to floor space demand per capita.

Industrial

It was concluded that there is demand for roughly 35-50 net hectares of industrial land from 2021-2046 (the resulting range of the three employment projections). For the purposes of land use planning, the Consultant Team advises ensuring a suitable supply of at least 100 net hectares of industrial land (essentially double the forecast need) to accommodate anticipated demand through 2046. Ideally, the city’s available land supply would be even greater, to ensure a broad range of options among prospective occupiers in terms of location, land pricing, servicing, and planning designation/permitted uses.

Office

The Consultant Team has concluded that there is demand for between roughly 0-6 net hectares of office land from 2021-2046 (the resulting range of the three employment projections). For the purposes of land use planning, the Consultant Team advises ensuring a suitable supply of at least 10 net hectares of office land to accommodate anticipated demand through 2046, in order to provide a range of site selection options, and to account for institutional-type office space demand not captured in our methodology.

Our forecast assumes suburban-style building forms. To the extent that future office employment is accommodated in the Downtown area in new development at higher densities, the quantum of overall land demand would decline accordingly. Depending on the prevalence of work from home arrangements going forward, excess supply in the exiting Downtown office market could absorb a share of future employment growth. Conservatively, our modeling does not account for this, and instead identifies the likely upper end of prospective office land requirements.

Institutional

Workers in jobs associated with the institutional sector have varied workplace environments, which range from schools (education) to hospitals and medical office settings (health care) to residential care facilities (social services) to public administration offices (government). Some of these facilities are found spread across a community (schools) and are planned for in new expansion areas. Others represent intensification on an existing institutional campus (such as colleges and universities, and hospitals/health care/social services uses). Others may be found in retail-commercial settings (medical clinics and some government functions – such as Service Canada/Service Ontario offices). A component of this job growth can be accommodated through intensification on existing properties/campuses, another component will occur in new growth areas as the city's population increases, and a further component will need lands designated for employment uses.

In discussion with major local institutional employers, the post-secondary education institutions each feature sufficient excess lands on campus to accommodate anticipated growth, while Health Sciences North's Ramsey Lake site is facing a need to "build out and build up" (but structured parking is very expensive). Ideally, this site would be expanded to make it easier for staff to move around among the various facilities on the site, rather than elsewhere in the city. In summary, ongoing land needs are to be monitored in collaboration with major local institutional employers.

Retail-Commercial

The Baseline Retail-Commercial Land Demand Scenario assumes that the current rate of retail space per capita is held constant over time. This results in a range of land demand from 0-10 net hectares, with the Reference Scenario indicating a need for approximately 4 net hectares to satisfy future demand. In contrast, the Reduced Space per Capita scenarios (10% and 20% reduction in demand) indicate that an assumed decline in demand would result in an actual excess of retail inventory, despite population growth occurring through 2046.

It is the view of the Consultant Team that new retail-commercial uses will continue to emerge, notwithstanding the downward pressure on retail space per capita. It is highly likely that some buildings within the existing inventory will become obsolete (due to their format, orientation, age, or other factors) and repurposed to a mixed use or other form of redevelopment, which would reduce the present space inventory. As well, small-scale projects, and lands for freestanding properties, will be demanded. Accordingly, sites must continue to be planned for and designated to meet requirements for new developments.

The Consultant Team recommends planning for 20 net hectares of retail-commercial land through 2046. This will provide sufficient flexibility for site selection and will include lands in new growth areas to accommodate neighbourhood-scale and convenience retail-commercial demand as the city’s population expands, while at the same time centrally-situated infill sites will still be sought-after by prospective retail-commercial developers.

Summary

LAND DEMAND CONCLUSIONS				
Employment Land Type	Reference Scenario (Net Hectares)	Low Scenario (Net Hectares)	High Scenario (Net Hectares)	Consultant Team Recommendation (Net Hectares)
Industrial	42.0	34.7	49.4	100
Office	3.0	0.2	5.9	10
Institutional	Land requirements to be monitored over time			
Retail-Commercial – Baseline	4.1	-1.6	9.8	20
Retail-Commercial – 10% Reduced Space per Capita	-9.3	-14.4	-4.2	
Retail-Commercial – 20% Reduced Space per Capita	-22.7	-27.2	-18.1	
<i>Note: Where negative land need is indicated, this means that no additional lands are required based on population/employment growth – although planning for employment lands must also consider the provision of suitable sites to satisfy site selection criteria such as location, accessibility, visibility, land price, lot size and orientation, servicing, and other economic/market factors.</i>				

It is important to note that while this land demand analysis is expressed in net hectares (the developable land area), the preceding land supply analysis is discussed in gross hectare terms (total land area). It is not possible within the scope of this project to identify the gross to net factor for individual employment land parcels (which in the case of parcels in the built-up area of the city may be nil), since there is a vast supply of vacant lands that may have development constraints such as natural features (waterways, wetlands, forests, etc.), potential issues related to site grading (un-level sites), site configuration (irregular shapes that may limit developability), and in the case of undeveloped areas, a requirement to provide for roads and stormwater management before the actual developable lands can be created. We have assumed that the majority of new industrial lands will require some adjustment to account for undevelopable lands, while new office and retail-commercial properties will develop across the existing urban areas of the city, and require no adjustment from gross to net land area.

The following summarizes the Consultant Team’s recommended employment land allocation by type, for the 2021-2046 horizon.

- Industrial land – 100 net hectares/125 gross hectares.
- Office land – 10 net hectares.
- Retail-Commercial land – 20 net hectares.
- Institutional land – ongoing land needs are to be monitored in collaboration with major local institutional employers.

Planning Policy Review

Overview

Through the lens of focusing on elements that are of particular importance to this Employment Land Strategy, the Consultant Team provided a review of the following documents: From the Ground Up 2015-2025: A Community Economic Development Strategic Plan; City of Greater Sudbury Official Plan; and City of Greater Sudbury Zoning By-law 2010-100Z. Each of these important documents provides a level of guidance for the future development of a range of employment-generating land uses. From an employment land perspective, the primary difference among the three documents relates to the level of detail provided.

- The Community Economic Development Strategic Plan builds on the collective strengths of the community by fostering alliances and partnerships between economic sectors, industries, and institutions.
- The Official Plan provides a more focused land use planning policy framework.
- The Zoning By-law provides the most detailed regulatory framework within which specific forms of development are mandated.

All of these documents work together to achieve a defined urban structure and a growth management strategy for the city.

From the Ground Up

From the Ground Up is a crucial foundational document that provides the City's economic development road map from 2015 to 2025. While the document identifies directions, objectives, and actions within a defined timeframe, the direction provided in From the Ground Up is expected to influence planning and investment decisions in the city for quite some time. The Strategic Plan is guided by its “Everest” goal of 10,000 net new jobs by 2025.

Official Plan

The City of Greater Sudbury Official Plan was first adopted by City Council on June 14, 2006. It was approved by the Ontario Municipal Board, in parts, beginning in 2008 and through to 2010. It has been amended on numerous occasions over time.

The Official Plan recognizes that *“The City of Greater Sudbury’s land supply consists of land at different stages in the land use planning cycle. This supply is designed to accommodate an appropriate range and mix of employment opportunities, housing, and other land use needs in the short, medium, and long term. The city’s existing supply of land is more than adequate to meet these needs.”* This statement is reinforced by the conclusions drawn from the Consultant Team’s land supply and demand analysis.

The Official Plan states that *“While mining continues to function as our core economic activity and primary export generator, Greater Sudbury has diversified over the last three decades to evolve as a regional centre of education, health care, government, business, retail, and tourism services. The establishment of several important advanced institutions and research facilities, combined with the city’s growth as a retail and tourism destination, has contributed to a local economy now focused on a full range of services production.”* This statement is crucial in considering the direction for the types of jobs the City is expecting to attract and accommodate in the coming years, and that, in turn, will have an impact on the land supply for various forms of employment-generating land uses that are desirable.

Zoning By-law 2010-100Z

The City of Greater Sudbury Zoning By-law is a substantial document, providing detailed development regulations for various land use categories. The Zoning By-law conforms with – and provides additional detail to – the policies of the City's Official Plan.

The Zoning By-law establishes a hierarchy of seven Commercial Zones that is intended to recognize various scales and functional roles within the urban centres and corridors of the city, as well as within the smaller outlying communities and within the rural parts of Greater Sudbury.

Similar to the Commercial Zones, the Zoning By-law establishes a hierarchy of Industrial Zones that reflect an array of functional and physical characteristics. In terms of accommodating future job growth in line with the City's economic development objectives, a range of industrial lands will be required, and need to be made available in order to capitalize on opportunities as they arise.

The Institutional Zone applies primarily to existing institutional uses. However, ongoing job growth within the institutional sector is a key part of the economic development strategy of the City. This zone category is an important contributor to that job growth, but it is difficult to predict institutional growth, including their individual requirements, and therefore difficult to pre-zone for those uses.

Infrastructure and Servicing Review

Having an understanding of the present infrastructure and servicing capacity and constraints facing the city's employment lands is critical to providing strategic land use guidance. The Consultant Team and City staff collaborated to develop a list of eight industrial areas across the city to review from a water, wastewater, and utilities perspective. This list is as follows: Fielding Road/Duhamel Road, Lasalle/Elisabella, National Street, Maley Drive, Coniston, Kingsway, Ceasar Road, and Valley East.

The Consultant Team undertook an analysis of infrastructure and servicing, with support from City staff. The purpose of this analysis was to provide high-level recommendations for further review of potential upgrades or construction of new water and wastewater infrastructure to support future growth within the industrial areas. The review provides an assessment of the remaining infrastructure capacity and updated costing (to 2021) in each area.

Hydro One prepared a *High Level Connections Options and Capacity Assessment*. Hydro One has assumed that the City of Greater Sudbury will construct a new transformer station to supply the new industrial developments. Further, Hydro One has confirmed that new customer transformer stations will be required for all of the industrial sites. Therefore, there is no rationale, from an electricity infrastructure perspective, to prioritize future industrial development in one location over another.

Enbridge Gas Inc. provided high-level information on the existing gas line infrastructure within each industrial area. Enbridge has noted that without knowing specific hourly load and delivery pressure requirements, they were not able to provide an assessment on available capacity.

Agilis Networks provided a high-level summary for the industrial lands regarding the availability of telecommunications. Agilis has indicated that each industrial area noted for this study has fiber communications available to the area, aside from the Kingsway industrial area (Agilis is currently working on upgrading this area).

Return on Investment Analysis

The Consultant Team’s return on analysis (ROI) assessment incorporates key inputs such as the land demand forecast; site coverage and employment density benchmarks; and infrastructure capital costs by employment area. As well, various municipal finance tools – such as development charges (city-wide DCs, area-specific DCs, and front-end financing) and debt financing are discussed.

Incremental revenues and costs are analyzed to identify future property taxes as well as water and wastewater revenues resulting from new development. Operating and lifecycle costs are benchmarked, with costs determined for each of the employment areas based on the required new/upgraded infrastructure. Guided by the land supply analysis and recommendations, a comparison of potential property tax uplift with estimated infrastructure costs is provided.

This ROI analysis is meant to inform the City, at a high level, of the prospective revenue and cost implications of the required infrastructure servicing to promote future land development in the industrial areas examined. Further, it is intended to provide general directional conclusions related to the servicing of each industrial area (positive impact or negative impact) and comparability across different scenarios, or combinations of scenarios. In conclusion, the provision of the required infrastructure in any of the areas (note: Coniston is excluded from the analysis) results in a positive return on investment (with the exception of Fielding Road/Duhamel Road, where total costs over a 50-year horizon slightly exceed potential incremental property tax value over the same time period).

The analysis of employment land supply across the City of Greater Sudbury identified an excess of industrial-designated lands to accommodate the forecast land demand through 2046. However, the status of land servicing and infrastructure capacity must also be considered. The Consultant Team’s assessment of water, wastewater, and utilities infrastructure across the industrial areas identified the required investments to bring these lands to a shovel-ready state, or to add the required capacity to support growth. Drawing upon this information, the Consultant Team strategically examined the opportunities in each area in order to provide guidance to City staff and Council to support future decision-making. These insights are informed by the amount of serviced lands required, the location of recent new industrial construction, considerations related to linear versus greenfield new development, and prospective property tax revenues versus infrastructure costs.

Strategic Recommendations

Introduction

This Employment Land Strategy concludes with a set of strategic recommendations, along with an indication of the related timing. The Consultant Team is confident that the analysis and strategic recommendations provided in this report will help position the City to attract future growth and to seize opportunities for employment land development.

Land Use Planning Recommendations

Overall Employment Land Supply

- At an aggregate level, the city has a more than adequate supply of vacant and underdeveloped Industrial and Commercial-designated land to meet anticipated demand through the 2046 forecast horizon.
- Importantly, this Employment Land Strategy provides key recommendations to ensure that an appropriate supply of investment-ready employment lands are provided to attract development and job growth over time, addressing issues such as land ownership, site selection, and servicing.

- While there is no vacant Institutional-designated land remaining, the major post-secondary educational institutions all have ample on-campus areas to accommodate growth. However, Health Sciences North faces a challenge at its landlocked Ramsey Lake site that must be addressed.
- There is no identified need for the City to directly intervene in the market through large-scale land acquisition to support economic development. There may be opportunities over time – on a case-by-case basis – for the City to acquire or divest employment land in order to facilitate efficient land use planning and to promote economic growth.

Industrial

- The city has a suitable amount of Industrial-designated lands in a variety of locations to suit occupier needs.
- There may be opportunities for industrial land conversion in select locations to facilitate sought-after development.
- The City may wish to explore a mechanism to facilitate expansions to the existing Settlement Area boundary for industrial uses in key locations where demand has historically been observed, where existing infrastructure can be leveraged, and where motivated landowners are eager to pursue opportunities.
- No changes to the Official Plan are suggested for the General Industrial or Heavy Industrial designations. The existing Industrial land use designations suitably identify a land supply that is available to accommodate multiple forms of industrial development, as well as complementary land uses.
- Although existing Industrial zones are suited to define the range of activities that take place on these lands, a modest set of changes to the existing zoning should be considered by the City in order to further the economic development aspirations of the Official Plan.
- The City should implement a Community Improvement Plan (CIP) targeted at the industrial sector in order to foster growth and attract and retain business.

Office

- The emerging consensus is that office work in the future will be a blend of work-from-home/flexible work and in-the-office settings. Despite an increase in the scale and frequency of work-from-home, future office land needs are likely to emerge in the Downtown, within Mixed Use Commercial areas, and may be a feature of redevelopment that occurs in Regional Centres.

Retail-Commercial

- There will be ongoing need for development sites for retail-commercial properties. Conversion of employment lands to a commercial use can be explored, while ensuring sufficient needed industrial lands remain available.
- There is potential for existing retail-commercial sites to be repurposed.
- The Regional Centres have significant potential to contribute to future employment in Greater Sudbury. These locations should be encouraged to develop as mixed use places.
- The Town Centres designation recognizes the distinct character in place across the existing and historic commercial centres throughout the municipality.
- A set of changes to the existing zoning should be considered by the City in order to further the economic development aspirations of the Official Plan.

Institutional Areas

- It is essential that City staff collaborate with major institutions to meet their ongoing land requirements in order to foster employment growth.
- No changes to the Institutional zone are suggested.

Downtown

- The City's Downtown Master Plan remains the guiding document directing the evolution of the area. The City could consider a more aggressive approach to fostering new downtown employment land development/revitalization by continuing to foster the environment for change, reducing development costs, and reducing the risk of the development approval process.

Brownfields

- From a land needs perspective, the redevelopment of brownfield sites is not required to meet anticipated employment land demand.

Infrastructure and Servicing Recommendations

Infrastructure Investment Strategy

- Additional water, wastewater, and utilities infrastructure is required to facilitate industrial land development through the 2046 forecast horizon.
- City staff and Council should evaluate both industrial real estate market considerations as well as municipal finance/return on investment outcomes in deciding upon an infrastructure investment plan to support economic growth.

Note Regarding Timing of Report

This comprehensive analysis of Greater Sudbury's employment lands was undertaken over a period of approximately two years. During this time, one phase of work informed the next in an iterative process, with continuous feedback from City staff.

- The employment land inventory discussed in this report reflects data collected in mid-late 2020. Any lands that have been absorbed, added, or removed from the inventory since this time are not reflected in our analysis.
- Infrastructure servicing reflects cost estimates updated to 2021.
- The study was completed based on information available at the time of writing the report, which included plans for the Kingsway Entertainment District (KED). However, it should be noted that the KED did not impact the industrial land supply, as the city has an excess of designated land in the Kingsway industrial area.
- This report reflects economic and market conditions at the time of writing, and is influenced by our post-pandemic outlook on real estate trends and their impact on employment land demand.

1.0 INTRODUCTION

1.1 Overview of Employment Land Strategy

1.1.1 Introduction

The City of Greater Sudbury is one of many Canadian cities that has transitioned away from its traditional reliance upon natural resource-related activities to underpin its economy, towards a more diversified base, led by growth in services. As the largest community in Northeastern Ontario, Greater Sudbury is the key regional service centre, and ranks as the 11th largest Census Metropolitan Area in the province. The overarching purpose of this Employment Land Strategy is to foster growth, and allow the City to leverage its competitive advantages to support an increasingly diversified economy.

In May 2020, the City of Greater Sudbury engaged a multi-disciplinary Consultant Team to undertake this Employment Land Strategy. Cushman & Wakefield is the lead firm, supported by sub-consultant firms metroeconomics, The Planning Partnership, SCS Consulting Group, NPG Planning Solutions, and Altus Group. The Consultant Team represents experts across a range of disciplines including real estate market analysis, land use economics, economic forecasting, planning policy and strategy, engineering, and municipal finance.

1.1.2 Project Overview

This Consultant Team has been formed to address the main goals of the project, which are:

- To improve the city's economic competitiveness and encourage the development of employment land;
- To ensure that the Employment Land Strategy, policies, and incentives support projected economic growth and development; and,
- To maintain an employment land inventory by applying a planning methodology that promotes the provision of an appropriate land supply.

In addition to these goals, our work explores engineering-related issues and municipal finance-related issues, along with matters related to land economics and industrial and commercial real estate.

Key issues for this project include:

- Identifying a suitable stock of employment lands in strategic locations to meet short and long-term demand by asset class;
- Understanding trends affecting office and industrial occupiers;
- Considering opportunities for intensification of existing sites;
- Evaluating the prospects for conversion of employment lands;
- Ensuring the protection of key sites for long-term employment use;
- Identifying potential infrastructure investments;
- Exploring the role of employment land development incentives; and,
- Addressing best practices for City involvement in the sale/lease of employment land.

1.2 Background Documents Review

1.2.1 Introduction

In the initial phase of this study, the Consultant Team reviewed a number of background documents. These included previous studies related to employment lands within the city, as well as planning policy documents, engineering-related reports, and those focused on municipal finance. Although some of the prior employment lands-related work that has been completed is now considered dated (circa early 2010s), a number of the conclusions and recommendations that were identified remain valid in today's environment. The following section summarizes some of the key analysis and findings (sometimes paraphrased, for brevity) of the precedent employment land studies undertaken on behalf of the City, including recent projections of population and employment growth that underpin local land use planning decision-making. In general, our interest is in trends and drivers of demand, and is not focused on past forecasts of population, employment, and land demand – although these figures may be referenced.

1.2.2 Growth & Settlement Background Report and Issues Paper (May 2012)

Select excerpts included below highlight notable element of the 2012 Growth & Settlement Background Report and Issues Paper's analysis and recommendations, which informed the Official Plan update. We have focused our summary on employment land-related items, in particular.

- This report is the first of several Background and Issue Papers that form part of the City of Greater Sudbury's Official Plan Review Program. The report sets the stage by describing the intent and components of the Official Plan's growth and settlement framework. The report examines the amount, type, and pattern of development in the last five years (i.e., 2006-2011), and provides some preliminary observations on how these trends fit with the intent and direction of the Official Plan. (p. 2)
- The Official Plan is based on population and household forecasts for 2006 to 2021. At that time, it was determined that the city's supply of land was sufficient to meet future long-term demand during the planning period, and beyond. (p. 3)
- The Synthesis/Land Use and Settlement Report looked at three growth scenarios:
 - The first scenario, "out-migration", assumes that more people will leave the city over and above the natural population increase and people migrating to the city;
 - The second scenario assumes that the amount of people out-migrating and in-migrating will balance each other out, leaving only natural increase to affect population levels; and,
 - Finally, the third scenario assumes that more people will be moving to the city, outpacing people leaving and the natural increase, resulting in an increase in the population. (p. 3)
- The Synthesis/Land Use and Settlement Report included a preliminary analysis of the city's future commercial and industrial land needs. This preliminary analysis estimated that every 100 person increase in population could create 46 new jobs. Twenty of these jobs would be population-serving, and not generate demand for new employment land. Twenty six of these jobs would be unrelated to the local population, and generate demand for new employment land at a rate of approximately 15 employees per hectare. Assuming that population to employment ratios in the city would remain constant, and using the high "in-migration" scenario, it was estimated that the number of jobs could rise by up to 6,900, which would translate into demand for approximately 260 hectares of new of employment land. (p. 4)
 - *NOTE: A more robust methodology to projecting future employment land demand would consider prospective employment growth by type of employment, and utilize a benchmark employment density by land use type to derive a forecast of demand. This is the approach that the Consultant Team will employ in this Employment Land Strategy.*

- The Synthesis/Land Use and Settlement Report estimated that there was approximately 1,767 hectares of land designated for employment use, not including areas designated for mineral exploration and mining. Given this supply, it was concluded that the land currently designated and available for employment land uses was sufficient to meet future needs in all three growth scenarios. (p. 5)
- The Official Plan defines communities, non-urban settlements, and rural and waterfront areas, and contains policies to guide future growth and development in each. Generally speaking, these policies are designed to direct the majority of new development to communities such as Sudbury, Valley East, Coniston, Lively and Azilda, where existing services are available. (p. 7)
- The Official Plan describes Communities as those places where most people in Greater Sudbury live and work. The Official Plan sees communities as the primary focus of future residential, employment, and institutional growth, in order to take best advantage of historic infrastructure investments in these areas, complete existing communities, and protect the natural environment. (p. 7)
- The Official Plan calls for new development to be phased to prevent "leap-frogging", ensuring the efficient use of land and infrastructure and the desired land use pattern is achieved. (p. 7)
- The Official Plan encourages intensification, redevelopment, and infill development, subject to certain criteria. It also calls for 10% of growth to be accommodated through intensification by 2015. (p. 7)
- The Official Plan encourages commercial, residential, and/or mixed use intensification in Downtown Sudbury, Town Centres, and Mixed Use Corridors (e.g., Lasalle Boulevard), subject to certain criteria. (p. 7)
- The Official Plan directs new employment and institutional uses to lands designated Downtown, Regional Centre, Town Centre, Mixed Use Commercial, Institutional, General Industrial, and Heavy Industrial. (p. 8)
- The Official Plan describes Non-Urban Settlements as less intensive land uses that are primarily residential in nature. Some have urbanized pockets, but most are rural, with few water and wastewater services. (p. 8)
- The vast majority (84%) of the city's land area is Rural. The Official Plan describes the Rural Area as places whose special qualities, such as waterfront areas, open spaces, natural features, and renewable and non-renewable resources, should be protected for the benefit of current and future generations. (p. 8)
- The Official Plan also permits a wide range of economic activity in the rural area, including mining, aggregate, forestry, agriculture, rural industrial uses, and rural commercial uses. (p. 8)
- Since 2001, the population of Greater Sudbury has increased by 5,055 people. Using the formula of 46 jobs per 100 people – established in the Synthesis/Land Use and Settlement Report – this increase in population over the last 10 years has resulted in 2,325 $(5,055/100) \times 46$ new jobs being created. Of those new jobs, 1,314 $(5,055/100 \times 26)$ of them required vacant industrial or commercial land/space.
 - *NOTE: This latter comment does not account for intensification that may have occurred on existing sites, nor higher employment density being achieved (employees added at existing businesses).*

Again, using the established formula of 15 employees per hectare on average, it can be determined that the new jobs created since 2001 have resulted in the use of 88 hectares of industrial/commercial land/space. Remove this land from the 1,767 hectares calculated in the Official Plan, and we are left with 1,679 hectares.

Projecting forward, the 10-year average population increase of 506 people per year would result in an increase of 10,406 people, or a total population of 170,680 by the year 2032. These additional 10,406 people would create approximately 4,786 new jobs, 2,706 of which would require vacant industrial/commercial land/space. At 15 employees per hectare, the employment land requirement for the next 20 years is estimated to be 180 hectares.

In terms of meeting this future employment land demand, it was determined in the Synthesis/Land Use and Settlement Report that there were 1,767 hectares of industrial lands that remained vacant, not including the large areas of land designated for mining exploration and operations. Moving forward to 2012, the City currently has four draft approved industrial subdivisions in place with a total area of 175 hectares. Using the established employment land demand formulas in the current Official Plan, it can be determined that the employment land demand for the next 20 years could be accommodated within the existing draft plans of subdivision. (p. 22)

- *NOTE: One of the primary objectives of this Employment Land Strategy is to identify whether the City of Greater Sudbury currently has an appropriate supply of employment land to meet anticipated demand through the 2021-2046 forecast horizon. 2046 is used as the final year for our projections, since it aligns with other growth management work that has been completed earlier on behalf of the City.*

1.2.3 Growth and Settlement Policy Discussion Paper (June 2013)

Select excerpts are provided below that related to employment lands, as discussed in the 2013 Growth and Settlement Policy Discussion Paper.

- The existing urban structure in Greater Sudbury is a result of the historical development of industrial uses, with many outlying settlements having been established as company towns. Over time, these communities and settlements have developed their own unique character and demographic mix. (p. 2)
- The purpose of this report is to build on the 2012 Growth and Settlement Background Report and Issues Paper by using new household and employment growth data generated through the Population, Housing, and Employment Needs Study. This study projects the future population, household, and employment growth in the city and at the community level over the next 20 years. (p. 8)
- The City of Greater Sudbury retained Hemson Consulting Ltd. to prepare population, household, and employment forecasts for the 2011-2036 period, at a city-wide and community level, to understand how population, housing, and employment could change in the long term. (p. 11)
- In terms of employment land supply, the City currently has four draft approved industrial subdivisions that total 175 hectares. In addition to the draft approved supply, there are approximately 795 hectares of vacant designated industrial lands, 108 hectares of vacant designated commercial land, and 2.8 hectares of vacant designated institutional lands within the settlement boundary. It was also determined that vacant legal lots of record within the built boundary included 162.4 hectares with industrial zoning, 19 hectares with institutional zoning, and 43 hectares with commercial zoning. Using the established formula of 15 jobs per hectare from the 2004 Synthesis/Land Use and Settlement Report, the draft approved lands can accommodate 2,625 jobs; the designated developable industrial, commercial, and institutional (ICI) lands can accommodate approximately 13,610 jobs; and the vacant ICI legal lots of record can accommodate approximately another 2,389 jobs. (p. 21)

- The high growth scenario projects that between 2011 and 2036, 8,612 new jobs will be created, or approximately 345 jobs per year. Using this estimated demand, the current draft approved industrial lots should last approximately 7 years. The lands that are currently vacant and designated as General Industrial, Commercial, and Institutional can provide another 39 years of supply, and the vacant ICI legal lots of record a further 7 years. Based on this analysis, there is currently a more than sufficient supply of draft approved and designated employment lands to meet the projected demand over the next 20 years. (p. 21)

1.2.4 Outlook for Growth to 2046 (March 2018)

The following excerpts are drawn from a report prepared by Hemson Consulting Ltd. which details population, housing, and employment projections from 2016-2046.

- Three different growth scenarios are presented:
 - The Low Scenario reflects the most recent Ministry of Finance projections, which are heavily influenced by a continuation of the out-migration of young adults, and limited prospects for economic growth.
 - The Reference Scenario reflects more recent trends indicating a mitigation of the out-migration of young people, the influence of currently committed investments in the mining industry, and some increase in the service/administrative functions that the city provides the broader region.
 - The High Scenario increases the share of the population represented by young adults, and adds to the economic outlook of the Reference Scenario by incorporating influences from investment in the Ring of Fire area. (pp. 1-2)
- Growth continues to be tied in large part to the city's central place and regional centre function, while also being strongly influenced by the mining industry. The former adds stability to the long-term outlook, while the latter creates variability with respect to the city's economic outlook, in turn creating potentially variable impacts on both employment and population growth. Over the longer term, the mineral potential of the Ring of Fire west of James Bay could still influence growth prospects. (p. 8)
- It is our view that the Reference Scenario represents the most likely outcome considering local and broader demographic and economic factors. The Low and High Scenarios are included here to illustrate the sensitivity of long-term growth prospects to changing economic conditions and migration trends. The modeling of these forecasts for employment results in small increases and decreases in employment by period. Given the small variations, this should be interpreted as stable employment from 2026 onwards.
 - The Low Scenario illustrates the city essentially maintaining its present population and employment levels over the forecast period.
 - The Reference Scenario is predicated on modest growth in the residential and non-residential sectors. The Reference Scenario assumes anticipated investments in the mining and institutional sectors occur as planned. However, if there was a shock to commodity prices or an economic slowdown similar to the recession that occurred between 2007 and 2009, the Reference Scenario forecast may be difficult to achieve.
 - The High Scenario was developed to test the effects of significant changes to in-migration that would lead to a larger share of young adults. This represents a best case outcome reflecting substantial influence from Ring of Fire investment, and leads to much higher population and employment growth rates than recent trends would generate. (pp. 18-22)
 - *NOTE: The COVID-19 health and economic crises represent the type of "shock" that is referenced in Hemson's description of the Reference Scenario. However, given that the horizon of this forecast is 25+ years, we remain comfortable relying on these population and employment projections to inform our employment land demand modeling.*

- From a current (2016) population of 166,130, the city’s population in 2046 may range from a low of 165,090, to a mid-range total of 172,990 under the Reference Scenario, or even to a high of 181,290 should economic conditions and migration to the city, notably by young adults, significantly change.

Similarly, from a 2016 total of 79,440 jobs, total employment could grow modestly to 81,230, increase under the Reference Scenario to 85,750, or possibly as high as 90,460 jobs under the High Scenario. (p. 28)

FORECAST POPULATION AND EMPLOYMENT BY SCENARIO						
Year	Population			Employment		
	Low	Reference	High	Low	Reference	High
2016	166,130	166,130	166,130	79,440	79,440	79,440
2021	167,130	167,800	168,720	80,570	80,970	81,520
2026	167,870	169,400	171,340	81,390	82,300	83,470
2031	167,320	170,400	174,210	80,960	82,810	85,080
2036	166,890	171,490	176,840	81,260	83,990	87,140
2041	166,180	172,000	179,200	81,590	84,970	89,160
2046	165,090	172,990	181,290	81,230	85,750	90,460
2016-2046	-1,040	6,860	15,160	1,790	6,310	11,020

1.2.5 Development Charge Background Study, Draft Executive Report (March 2019)

The Development Charge Background Study relies on the Reference Scenario growth projections prepared by Hemson Consulting Ltd. in the Outlook for Growth to 2046 report discussed above. Select excerpts of note are provided below.

- The anticipated employment growth is consistent with the City’s Outlook for Growth. Total employment is anticipated to reach 82,500 by 2028, and nearly 85,000 by 2041. However, only place of work employment is considered for the purposes of the Development Charge (DC) calculation. Place of work employment is anticipated to grow by 2,360 jobs over the ten-year planning period, to a total of 79,200. (pp. 13-14)
- Employment densities have been used to convert the employment forecast into building space estimates. The forecast considers three non-residential categories: employment land (industrial), population-related (commercial and institutional), and major office. Rural employment growth is not anticipated to generate any additional floor space. The following densities, by employment type, have been utilized in this study:
 - Population-Related: 540 sf per employee
 - Employment Land: 1,000 sf per employee
 - Major Office: 290 sf per employee. (p. 14)
- Over the ten-year forecast period, an additional 131,600 sf of major office, 408,800 sf of population-related employment space, and 1.36 million sf of employment land space is projected to be built. In total 1.8 million sf of non-residential floor space is forecast to be added between 2019 and 2028 to accommodate 2,360 additional employees. By 2041, approximately 3.74 million sf of new non-residential space is anticipated. (p. 14)

- *NOTE: The Consultant Team will use employment density assumptions in our work as part of this Employment Land Strategy. A projection of employment by industry will be translated into land demand based on benchmark site coverage ratios by building type (for office and industrial-type jobs). Retail land demand will be forecast using a projection of population growth and a benchmark of retail space per capita, along with a benchmark site coverage ratio.*

1.3 Stakeholder Consultations

The Consultant Team engaged in stakeholder consultations with a range of participants to explore local economic, employment, and real estate-related issues. The purpose of these consultations was to inform our background review and identify additional areas for further focused analysis. The list of stakeholders that we engaged with includes the following:

- City of Greater Sudbury staff from various departments;
- Greater Sudbury Development Corporation (GSDC);
- City of Greater Sudbury Mayor and City Council members;
- Representatives from Atikameksheng Anishnawbek First Nation and Wahnapiatae First Nation;
- Various community groups and institutions (Chamber of Commerce, Laurentian University, Cambrian College, Collège Boréal, Health Sciences North, and Greater Sudbury Airport);
- Various local business and major employers (including Glencore and Vale); and,
- Local real estate market participants (developers, landlords, brokers, and appraisers).

A synopsis of stakeholder feedback is included in Appendix 1 of this report.

2.0 LAND SUPPLY ANALYSIS

2.1 Overview of Approach and Methodology

The Consultant Team used Geographic Information Systems (GIS) data provided by City staff in mid-late 2020 to identify the inventory of employment lands city-wide – both occupied sites (those with one or more buildings), as well as vacant sites (undeveloped land). Our analysis focused on sites under the following Official Plan designations: Downtown, Regional Centre, Town Centre, Mixed Use Commercial, General Industrial, Heavy Industrial, and Institutional. Sites located under the following Official Plan designations were not relevant to our analysis of lands that support employment: Living Area 1, Living Area 2, Urban Expansion Reserve, Mining/Mineral Reserve, Aggregate Reserve, Agricultural Reserve, Parks & Open Space, and Rural. Of note, while there may be future employment generated on lands identified as Mining/Mineral Reserve, Aggregate Reserve, and Agricultural Reserve, this Employment Land Strategy is focused on Industrial, Commercial, and Institutional land requirements.

There are over 3,000 properties – individual Assessment Roll Numbers (ARN) – across Greater Sudbury identified within the Official Plan designations that are the focus of our analysis. For the purposes of this study, an individual property refers to a single Assessment Roll Number (which may be comprised of more than one parcel of land, all of which share that ARN).

In some cases, due to the nature of the GIS mapping and the potential for an overlap across a single site of more than one Official Plan designation (e.g., General Industrial and Parks & Open Space), it was necessary to take a close look at the mapping to identify whether or not a given property was suited for inclusion in the overall employment land inventory (i.e., in this stated example, is it potentially developable land, or is there a body of water present or other feature that might preclude development as an employment use?).

The City of Greater Sudbury covers a vast land area, and is a geographically dispersed cluster of settlements located around the urban core of Sudbury. The GIS data enabled the Consultant Team to identify whether an individual property is located within an established Settlement Area, or whether it is located beyond a Settlement Area boundary (note: when a property straddled a boundary, it was considered to be inside the Settlement Area, for the purposes of our analysis). This employment land inventory is focused on properties within the Settlement Areas across Greater Sudbury. Should the land supply and demand analysis indicate that there is a shortfall of suitable properties to accommodate growth, it may be necessary to explore the viability of adjusting Settlement Area boundaries; however, at this initial stage of the analysis, such work is considered premature. In our inventory, we have identified the geography associated with each property, drawing upon the former Secondary Plan names that were in place pre-amalgamation, in order to understand the spatial distribution of employment lands across the city.

The data provided by City staff has enabled the Consultant Team to compile a comprehensive employment land inventory with the following attributes for each property:

- Municipal address;
- Settlement name, former Secondary Plan name, and identified geography for our analysis;
- Location within or beyond a Settlement Area boundary;
- Municipal Property Assessment Corporation (MPAC) property code, description, and value;
- Land area, in hectares (ha);
- Building footprint, in square metres (m²);
- Site coverage – the building footprint divided by the land area, as a percentage (%);

- Official Plan designation(s) and zoning designation(s);
- Property owner (including City-owned properties); and,
- Whether there is water and/or wastewater and/or natural gas service to the property, or within a 50 metre buffer of the property line.

The preceding information was used by the Consultant Team to identify whether or not each property should be included as part of the City’s employment land inventory. The following additional notes apply to our development of the inventory:

- Properties associated with utilities have been excluded from the employment land inventory – whether occupied or vacant. While some future employment growth may be related to these sites, it is not part of the focus of this report. The following MPAC property codes apply to this exception:
 - 555 – OPG hydraulic generating station
 - 558 – Hydro One transformer station
 - 560 – MEU transformer station
 - 561 – Hydro One right-of-way
 - 590 – Water treatment/filtration/water towers/pumping station
 - 591 – Sewage treatment/waste pumping/waste disposal
 - 595 – Heat or steam plant
- Surface parking lots – whether in conjunction with another property, or a standalone use – are a feature of the built environment across the city, and account for a share of the vacant designated lands. We have taken these sites into consideration in our employment land inventory as follows:
 - There are 32 properties identified as MPAC code 480 – Surface parking lot which excludes parking facilities that are used in conjunction with another property. These properties are predominantly located within the Downtown area (28 of the 32 properties), and are generally very small (all are less than one-third of a hectare). While these have been included as part of the vacant employment land inventory, it must be recognized that any future development of these sites may require the parking to be replaced in order to maintain an adequate supply in the Downtown area. However, given the small size of many of these sites, future development may not be feasible.
 - There are 41 properties identified as MPAC code 482 – Surface parking lot used in conjunction with another property. These properties are predominantly located within the Downtown area (26 properties) and in the Mixed Use Commercial areas (11 properties). These sites are generally quite small (37 of the 41 properties are less than one-third of a hectare), and collectively total approximately 9 hectares in size. While these properties are included within the vacant employment land inventory, it is unlikely that they will meaningfully contribute to future development within the city, from a land needs perspective, given their association with another (likely adjacent) parcel of land which has been developed.
- In terms of identifying the level of municipal services available to undeveloped employment lands, we have used GIS data to determine whether there is water and/or wastewater and/or natural gas service available directly to the site, or within a 50 metre buffer from the property boundary (considered readily serviceable, and classified as “serviced” in our database, for the purpose of this analysis). We were unable to identify the extent of hydro service available, due to GIS data limitations. This will be addressed separately in a later section of this report.

The Consultant Team has developed a detailed inventory of vacant employment land by type for the City of Greater Sudbury, as presented below.

2.2 Industrial Land Supply

2.2.1 Analysis of Industrial Land Supply

The Consultant Team has identified a vacant industrial land inventory of over 830 gross hectares across 150 individual sites within the Settlement Areas that comprise Greater Sudbury. These vacant lands are distributed across the two types of Official Plan categories of industrial land as follows: General Industrial (783 gross hectares – 94% share of all vacant Industrial-designated land), and Heavy Industrial (49 gross hectares – 6% share of total). While the Official Plan identifies that general industrial uses may be permitted in Mixed Use Commercial areas (subject to certain conditions being met), for the purposes of preparing this industrial land inventory, we have focused our review on only the General Industrial and Heavy Industrial-designated lands.

In terms of municipal services (including water, wastewater, and natural gas), 46% of the total vacant industrial land supply (General Industrial and Heavy Industrial, combined) is serviced (382 hectares), 38% is partially serviced (318 hectares), and 16% is unserved (132 hectares).

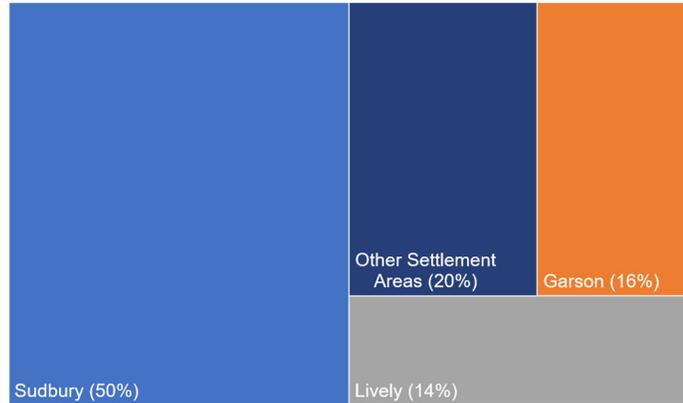
VACANT INDUSTRIAL LAND BY OFFICIAL PLAN DESIGNATION AND SERVICING STATUS								
Official Plan Designation	Serviced		Partially-Serviced		Unserviced		TOTAL	
	# of sites	Area (ha)	# of sites	Area (ha)	# of sites	Area (ha)	# of sites	Area (ha)
General Industrial	69	382.1	58	269.1	21	131.5	148	782.6
Heavy Industrial	0	0.0	2	49.0	0	0.0	2	49.0
TOTAL	69	382.1	60	318.1	21	131.5	150	831.6

The exhibit below illustrates the location of occupied and vacant Industrial-designated lands across Greater Sudbury, by geographic area.

INDUSTRIAL LAND BY GEOGRAPHY						
Geography	Occupied (ha)	% Share	Vacant (ha)	% Share	TOTAL (ha)	% Share
Sudbury	1,202.0	54%	340.7	41%	1,542.7	50%
Garson	457.8	20%	36.7	4%	494.5	16%
Lively	322.8	14%	94.2	11%	417.0	14%
Coniston	69.1	3%	226.2	27%	295.3	10%
Valley East	55.4	2%	80.0	10%	135.4	4%
Capreol	73.7	3%	0.5	0%	74.1	2%
Chelmsford	13.4	1%	52.2	6%	65.6	2%
Onaping	28.0	1%	0.0	0%	28.0	1%
McFarlane Lake Flats	16.2	1%	0.0	0%	16.2	1%
Other Settlement Areas	4.5	0%	1.2	0%	5.7	0%
TOTAL	2,243.0	100%	831.6	100%	3,074.6	100%

- Sudbury is home to roughly one-half of the occupied Industrial-designated lands and approximately 40% of the vacant Industrial-designated lands, with a total of some 1,540 hectares. Of this supply, just over 340 hectares is vacant.
- Garson has the second largest inventory of industrial land (close to 500 hectares), followed by Lively (roughly 420 hectares).
- Coniston is home to Greater Sudbury’s second largest inventory of vacant Industrial-designated lands, at close to 230 hectares.
- Together, the three Settlement Areas of Sudbury, Garson, and Lively account for 80% of the City’s total Industrial-designated lands, and 57% of the vacant land supply.

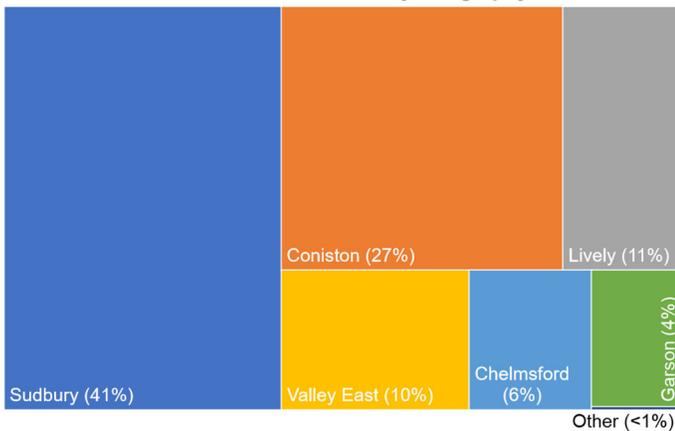
Industrial Land by Geography



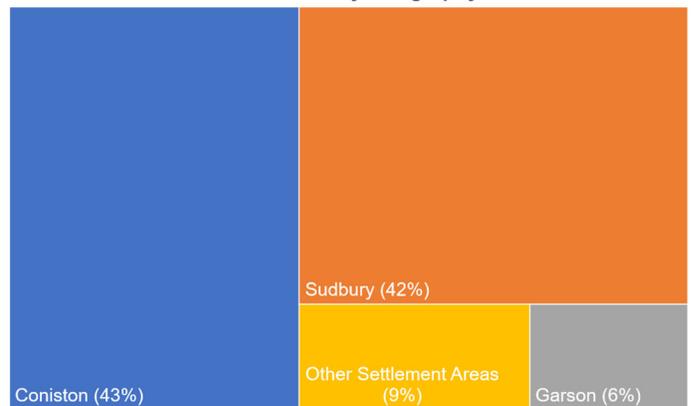
The following identifies the vacant industrial lands by geography, along with servicing status.

VACANT INDUSTRIAL LAND BY GEOGRAPHY AND SERVICING STATUS								
Geography	Serviced (ha)	% Share	Partially-Serviced (ha)	% Share	Unserviced (ha)	% Share	TOTAL (ha)	% Share
Sudbury	161.3	42%	137.3	43%	42.1	32%	340.7	41%
Coniston	163.4	43%	0.0	0%	62.9	48%	226.2	27%
Lively	5.9	2%	72.4	23%	15.9	12%	94.2	11%
Valley East	9.4	2%	70.6	22%	0.0	0%	80.0	10%
Chelmsford	17.1	4%	35.1	11%	0.0	0%	52.2	6%
Garson	23.4	6%	2.7	1%	10.6	8%	36.7	4%
Other Settlement Areas	0.7	0%	0.0	0%	0.0	0%	0.7	0%
TOTAL	382.1	100%	318.1	100%	131.5	100%	831.6	100%

Vacant Industrial Land by Geography



Vacant Industrial Land by Geography – Serviced

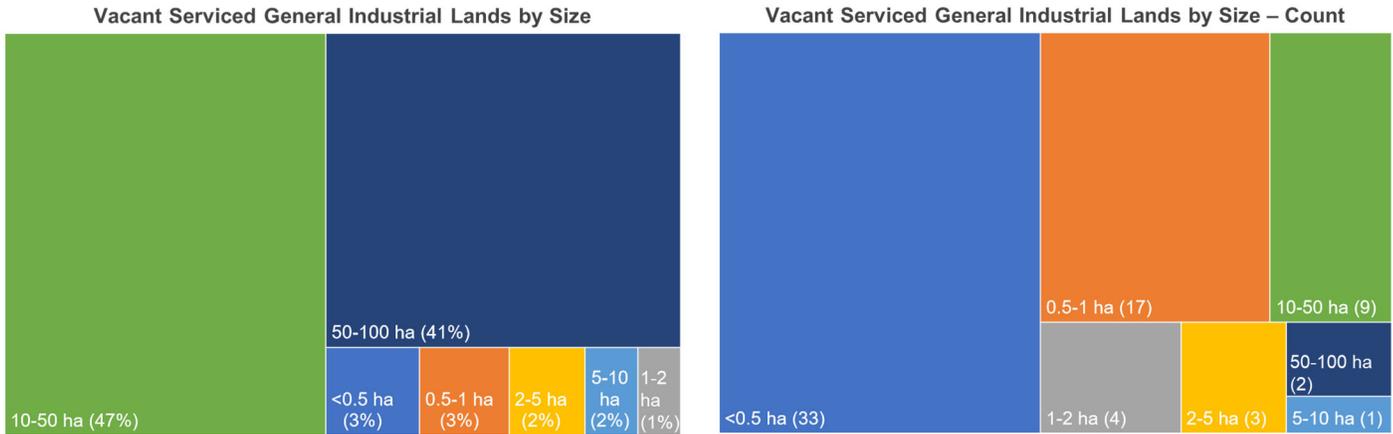


- Together, Sudbury and Coniston account for 85% of the vacant, serviced industrial land (325 hectares, split evenly between the two Settlement Areas). Garson (23 hectares, 6% share) represents the next largest opportunity for serviced industrial land.
- Partially-serviced lands refer to properties with one or two but not all three of the following services: water, wastewater, and natural gas (either in-place, or available within 50 metres of the property line). Partially-serviced lands total nearly 320 hectares within Settlement Areas city-wide (accounting for almost 40% of the total Industrial-designated land supply), and may represent an opportunity to accommodate future growth, depending on the needs of occupiers.

Since there is only a single large, vacant site designated as Heavy Industrial (a nearly 50-hectare parcel located at 3045 Lasalle Boulevard, on the east side of Sudbury), our remaining analysis of vacant Industrial-designated land is focused on the General Industrial category. The exhibit below illustrates the distribution of vacant General Industrial-designated lands by parcel size and servicing.

VACANT GENERAL INDUSTRIAL LANDS BY PROPERTY SIZE AND SERVICING									
	<0.5 ha	0.5-1 ha	1-2 ha	2-5 ha	5-10 ha	10-50 ha	50-100 ha	>100 ha	TOTAL ha
Serviced									
# of Parcels	33	17	4	3	1	9	2	0	69
Total Area (ha)	11.6	11.1	5.3	9.4	6.6	181.4	156.6	0.0	382.1
% Share of Total Area									46%
Partially Serviced									
# of Parcels	19	10	11	7	3	9	1	0	60
Total Area (ha)	5.8	6.5	14.6	25.3	20.0	185.4	60.6	0.0	318.1
% Share of Total Area									38%
Unserviced									
# of Parcels	11	1	2	1	3	2	1	0	21
Total Area (ha)	3.5	0.5	2.6	4.1	22.4	35.5	62.9	0	131.5
% Share of Total Area									16%
TOTAL									
# of Parcels	63	28	17	11	7	20	4	0	150
Total Area (ha)	20.9	18.1	22.5	38.7	49.0	402.3	280.1	0	831.6
% Share of Total Area									100%

- In terms of parcel size, just over 70% of the vacant General Industrial-designated industrial parcels are less than 2 hectares in size (and 60% are less than 1 hectare), meaning that there is a limited range of site selection options for users seeking a large site for development.



In addition to this analysis of undeveloped (unoccupied) lands, there is potential capacity across the existing stock of developed industrial lands to accommodate future growth. In particular, properties that exhibit a low site coverage (the building footprint divided by the land area, typically expressed as a percentage) may offer excess land that can accommodate expansion.

For industrial uses, a typical site coverage is in the range of 25-30%. This facilitates sufficient space for shipping/receiving and truck movements, staff parking, outside materials storage, landscaping, etc. In high-cost land markets, the industrial site coverage may reach 40% for some properties (particularly warehousing and distribution-type uses, with some on-site truck parking, but no outside materials storage). Properties with a very high site coverage may serve a function as ancillary buildings on small sites that are adjacent to other primary business operations. Properties with a high site coverage very likely have no future intensification potential through building expansion. In lower cost land markets – and where storage of vehicles, machinery, and raw and finished goods is a prevalent feature in industrial areas – the typical site coverage may be as low as 15-20%. A low site coverage ratio could also be influenced by minimum distance separation requirements from adjacent properties, depending on the on-site use. Undevelopable land due to topography, soil conditions, and/or natural features may also be a limiting factor.

In reviewing the City’s GIS data, developed industrial lands across Greater Sudbury have an average site coverage of just 13%. This overall average is impacted by the presence of some very large land parcels with comparatively limited building space on site – in many cases related to resource extraction. When only smaller land parcels are considered, sites less than 2 hectares in size have an average site coverage of 16%, while sites less than 1 hectare average approximately 17%.

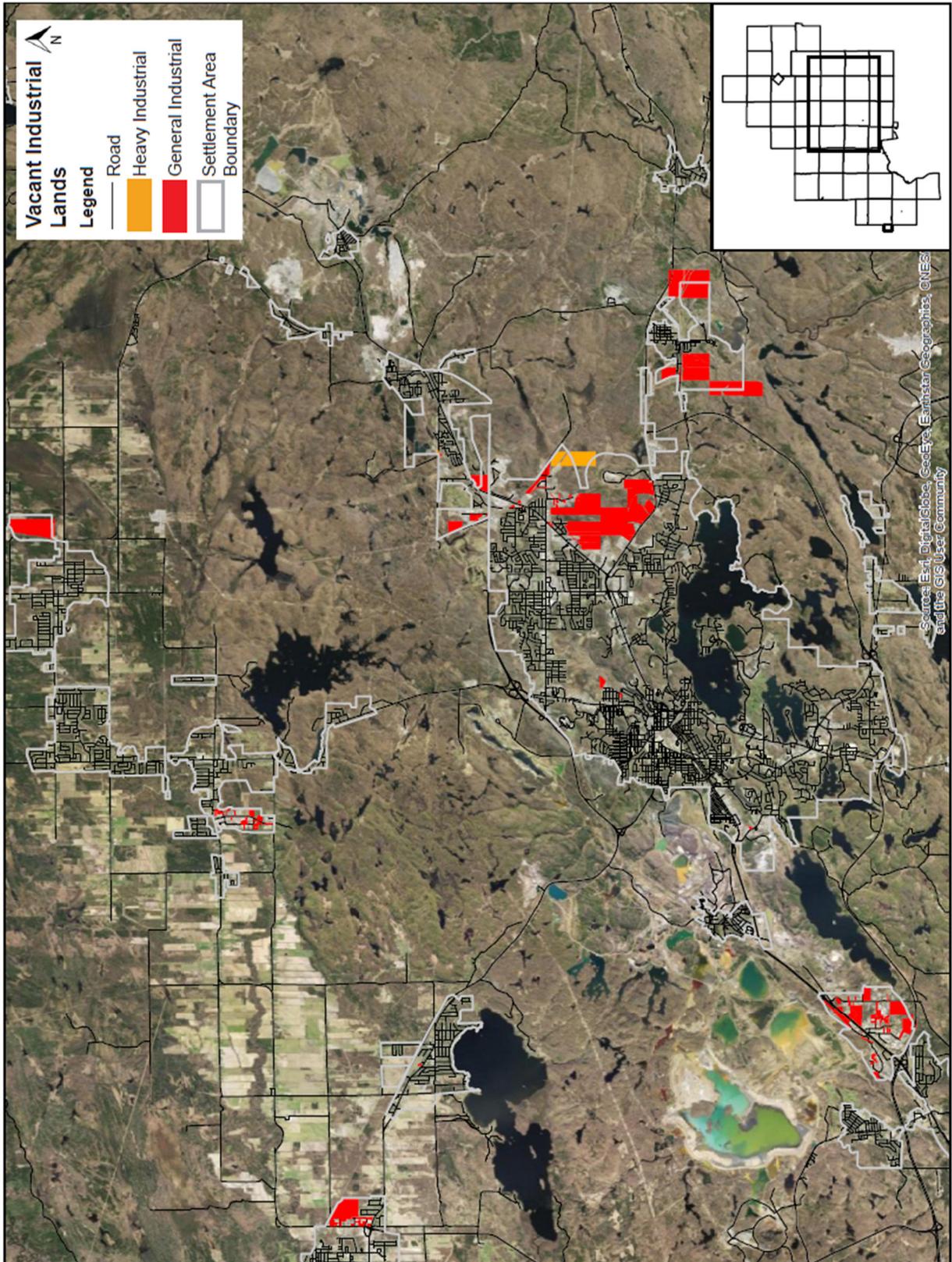
This analysis of industrial site coverage suggests that there is some capacity for expansion across the existing industrial stock to accommodate future industrial-type employment growth. However, while this enables expansion of existing businesses, it does not address land needs for new market entrants. Accordingly, it is incumbent upon the City to plan for a 20-year supply of employment land for development purposes.

2.2.2 Conclusions

At an aggregate level, there is a considerable supply of remaining undeveloped, designated industrial lands across Greater Sudbury. This is particularly the case for General Industrial-designated sites (over 780 vacant hectares). However, the location, size, and servicing status of these lands must be considered in assessing their capacity to be absorbed over time. As well, there are existing occupied lands which may represent opportunities for intensification, or potentially redevelopment. Further, there are serviced employment lands at Greater Sudbury Airport that may be suitable for industrial development (excluded from our inventory) – although these lands are not available for acquisition. These Airport lands would be subject to a land lease arrangement.

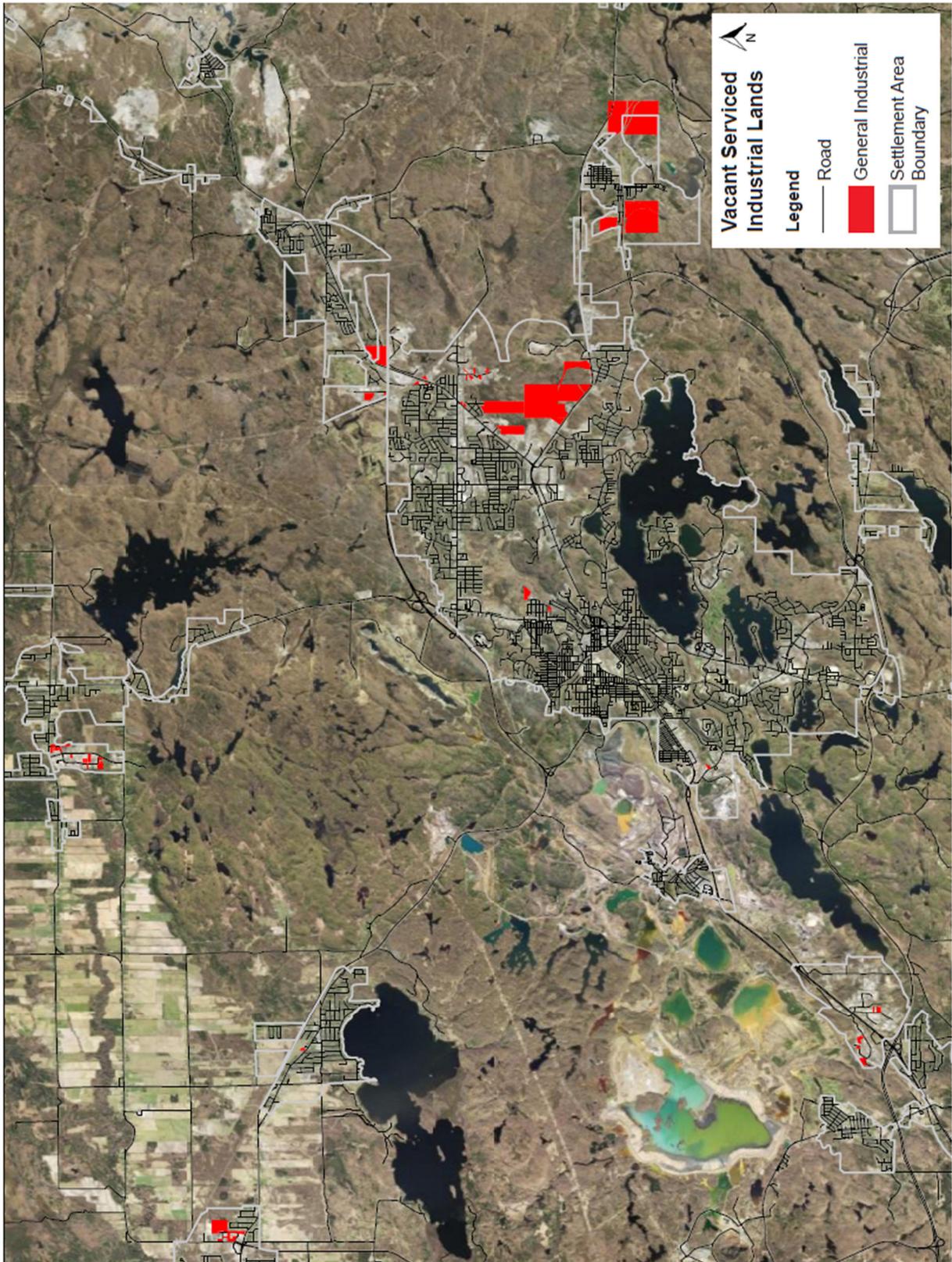
2.2.3 Vacant Industrial Lands Map

The following map identifies the vacant industrial lands across the city, by type (General Industrial and Heavy Industrial).



2.2.4 Vacant Serviced Industrial Lands Map

The following map identifies the vacant, serviced industrial lands across the city (all of which are General Industrial).



2.3 Local Industrial Market Perspectives

In June 2020, members of the Consultant Team completed market reconnaissance of the city's industrial/business park areas. Our focus was on the industrial areas in Sudbury and Lively, which comprise the vast majority of the City's designated Industrial lands. The more outlying Settlement Areas were not visited, although a desktop inspection of available mapping was completed. The following is a summary of key observations:

- Single occupant buildings constitute a significant share of the properties located in Greater Sudbury's industrial areas, as opposed to multi-tenanted properties. This is likely due to the presence of a high degree of owner-occupied buildings (as opposed to investor-owned buildings leased to tenants) in this market.
- The Consultant Team observed very little space for lease, as indicated by a scarcity of real estate brokerage signage within the industrial areas. It is our impression that the relatively high rate of owner-occupied buildings contributes to this low vacancy rate observed.
- In some areas, there is a significant amount of outside storage of vehicles, machinery, equipment, and materials. In particular, heavy vehicle/equipment storage is a common feature of Greater Sudbury's industrial areas, due to the extent of mining and related support activity that takes place nearby.

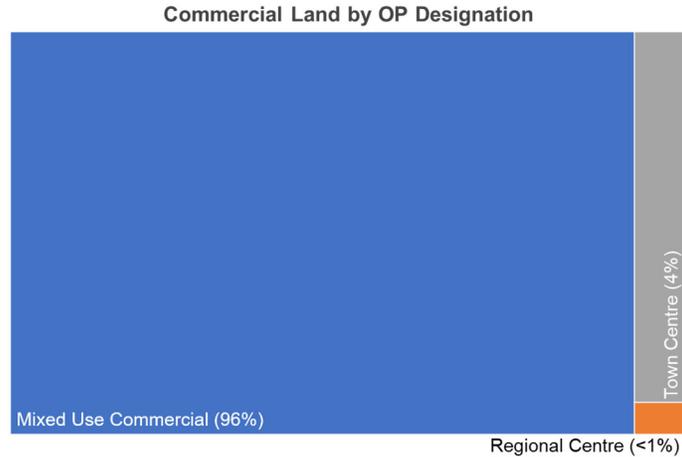
2.4 Commercial Land Supply

2.4.1 Analysis of Commercial Land Supply

The Consultant Team has identified a vacant commercial land inventory of some 340 gross hectares across nearly 160 individual sites. These vacant lands are distributed across the three types of Official Plan categories of commercial land as follows: Mixed Use Commercial (326 gross hectares – a 96% share of all vacant Commercial-designated land), Town Centre (just over 12 hectares, 4% share), and Regional Centre (1 gross hectare, <1% share).

In terms of servicing, close to one-half of the vacant Commercial-designated land is unserviced – although this comment pertains entirely to two properties located in the south part of Sudbury (southeast of the Long Lake Road and Trans-Canada Highway interchange) which are partially designated as Mixed Use Commercial, and partially Rural (due to their large size).

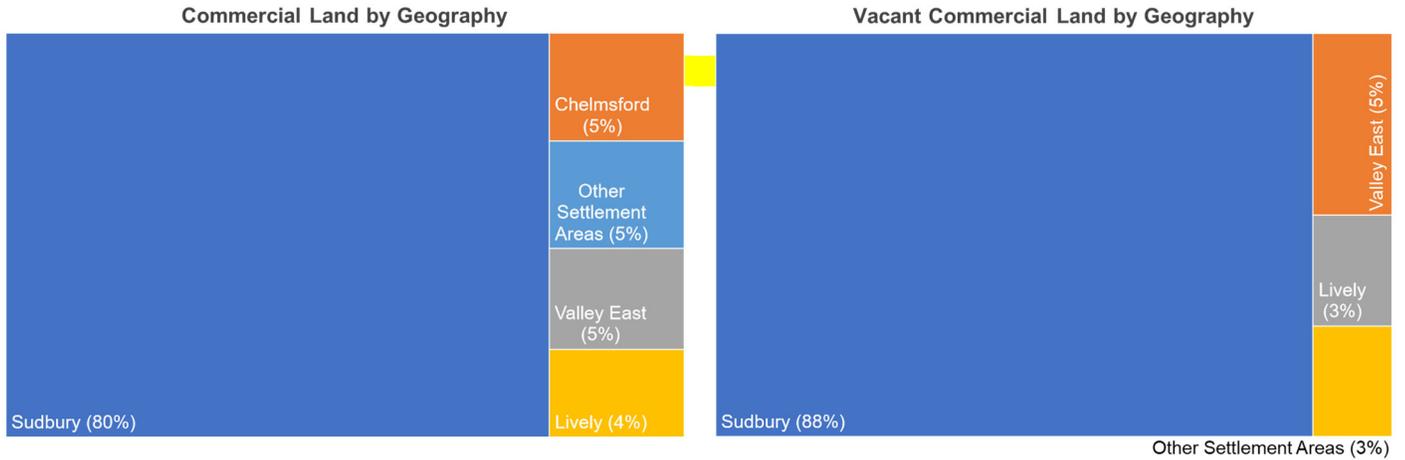
VACANT COMMERCIAL LANDS BY OFFICIAL PLAN DESIGNATION AND SERVICING STATUS								
Official Plan Designation	Served		Partially-Served		Unserviced		TOTAL	
	# of sites	Area (ha)	# of sites	Area (ha)	# of sites	Area (ha)	# of sites	Area (ha)
Mixed Use Commercial	127	156.2	8	10.6	2	158.9	137	325.7
Regional Centre	3	1.0	0	0.0	0	0.0	3	1.0
Town Centre	17	12.1	0	0.0	0	0.0	17	12.1
TOTAL	147	169.3	8	10.6	2	158.9	157	338.8



The exhibit below illustrates the location of occupied and vacant Commercially-designated lands across Greater Sudbury, by geographic area.

COMMERCIAL LAND BY GEOGRAPHY						
Geography	Occupied (ha)	% Share	Vacant (ha)	% Share	TOTAL (ha)	% Share
Sudbury	541.9	76%	299.3	88%	841.2	80%
Chelmsford	51.3	7%	4.6	1%	55.9	5%
Valley East	34.3	5%	17.8	5%	52.1	5%
Lively	34.7	5%	10.9	3%	45.6	4%
Garson	14.3	2%	0.3	0%	14.6	1%
Capreol	5.6	1%	5.0	1%	10.7	1%
Dowling	8.9	1%		0%	8.9	1%
Azilda	6.6	1%	0.3	0%	6.9	1%
Coniston	4.7	1%		0%	4.7	0%
Other Settlement Areas	9.3	1%	0.6	0%	9.9	1%
TOTAL	711.6	100%	338.8	100%	1,050.5	100%

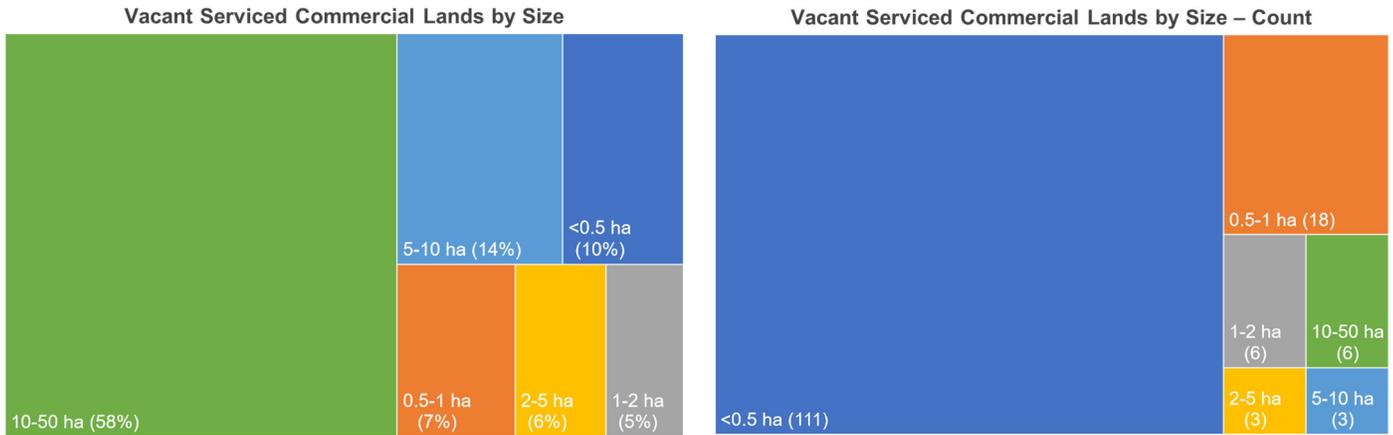
- Sudbury is home to 80% of the overall Commercial-designated land supply, and nearly 90% of the vacant Commercially-designated lands in the city.
- Valley East (nearly 18 hectares, 5% share of vacant commercial land supply) and Lively (nearly 11 hectares, 3% share) also contribute to opportunities for future commercial development in Greater Sudbury. The remaining Settlement Areas have only limited commercial lands.



The exhibit below illustrates the distribution of vacant, serviced Commercial-designated lands by parcel size and Official Plan designation.

VACANT SERVICED COMMERCIAL LANDS BY PROPERTY SIZE AND OFFICIAL PLAN DESIGNATION								
	<0.5 ha	0.5-1 ha	1-2 ha	2-5 ha	5-10 ha	10-50 ha	>50 ha	TOTAL ha
Mixed Use Commercial								
# of Parcels	95	15	6	3	2	6	0	127
Total Area (ha)	15.4	10.5	8.3	9.7	14.4	97.9	0.0	156.2
% Share of Total Area								92%
Regional Centre								
# of Parcels	2	1	0	0	0	0	0	3
Total Area (ha)	0.3	0.7	0.0	0.0	0.0	0.0	0.0	1.0
% Share of Total Area								1%
Town Centre								
# of Parcels	14	2	0	0	1	0	0	17
Total Area (ha)	1.5	1.4	0.0	0.0	9.2	0.0	0.0	12.1
% Share of Total Area								7%
TOTAL								
# of Parcels	111	18	6	3	3	6	0	147
Total Area (ha)	17.2	12.6	8.3	9.7	23.6	97.9	0.0	169.3
% Share of Total Area								100%

- By count of property, there is a concentration of undeveloped, serviced Commercial-designated sites in the smallest categories (properties less than 1 hectare in size account for 129 of the total 147 sites, or almost 90% of all parcels). This means that there is a limited range of site selection options for users seeking a large parcel for development with servicing in place.



The 25 largest existing retail-commercial properties in the city have an average site coverage of 26%, which is considered typical (25% is a reasonable benchmark). This scale of development enables sufficient parking space and vehicular circulation, plus shipping/receiving, and on-site landscaping. Overall, it can be concluded that there likely is limited capacity across the existing retail-commercial inventory to absorb additional floorspace.

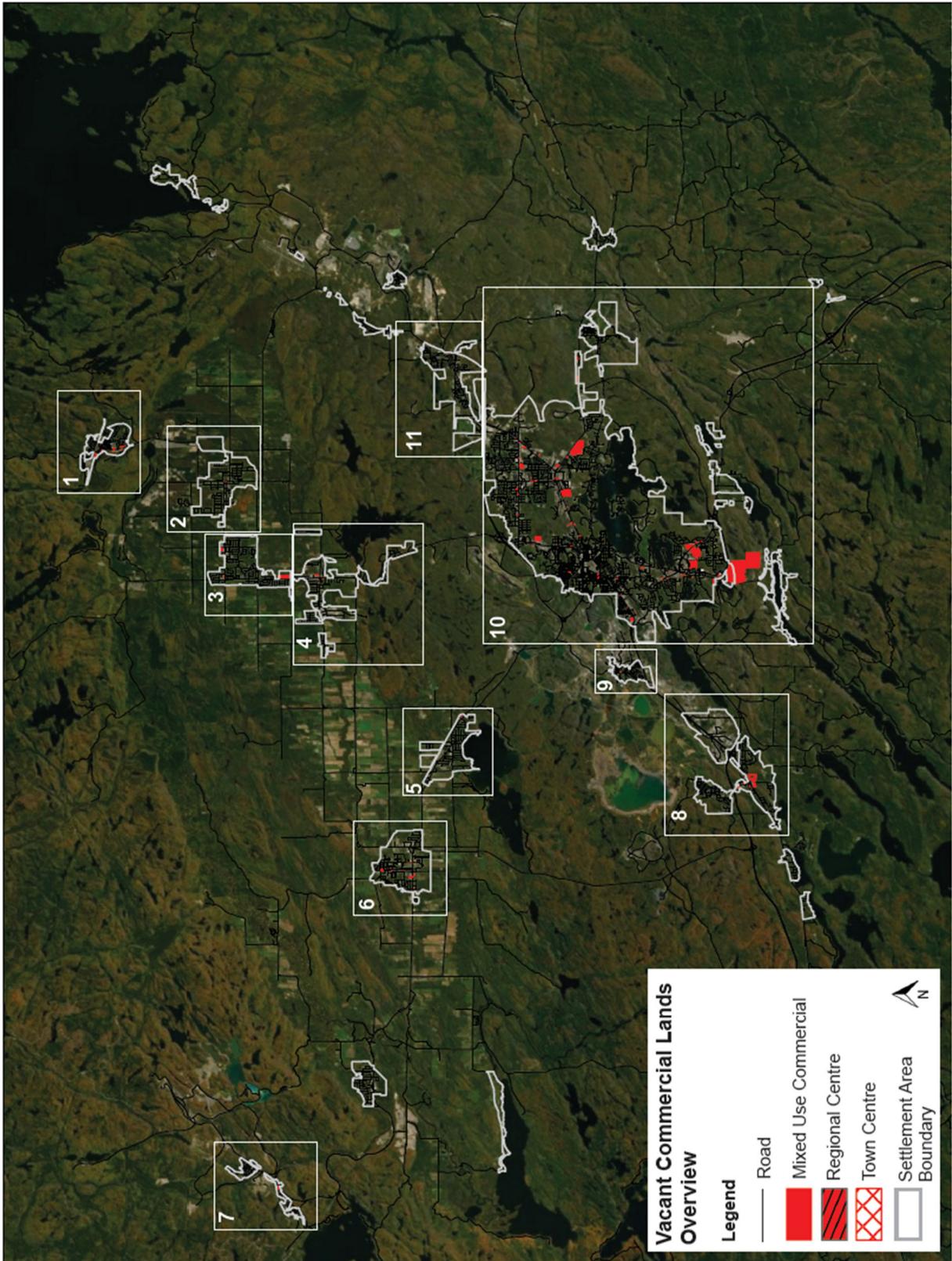
2.4.2 Conclusions

While there is an identified supply of nearly 340 hectares of Commercially-designated lands city-wide – almost half of which is serviced – there are limitations to the development prospects for a portion of this supply. The vast majority of these vacant lands are Mixed Use Commercial, meaning that the Regional Centre designation has only a limited extent of vacant lands. However, there may be considerable potential to intensify some existing large sites, as well as redevelop under-performing properties over time.

When examining the property size by count of parcels available, it is clear that the smallest parcels account for the largest share of available, serviced lands (properties less than 1 hectare in size account for 129 of the total 147 sites, or 90% of all parcels). However, the limited extent of larger, undeveloped, Commercially-designated lands may not be problematic, depending on the outcome of the land demand assessment, which is presented in a later section of this report.

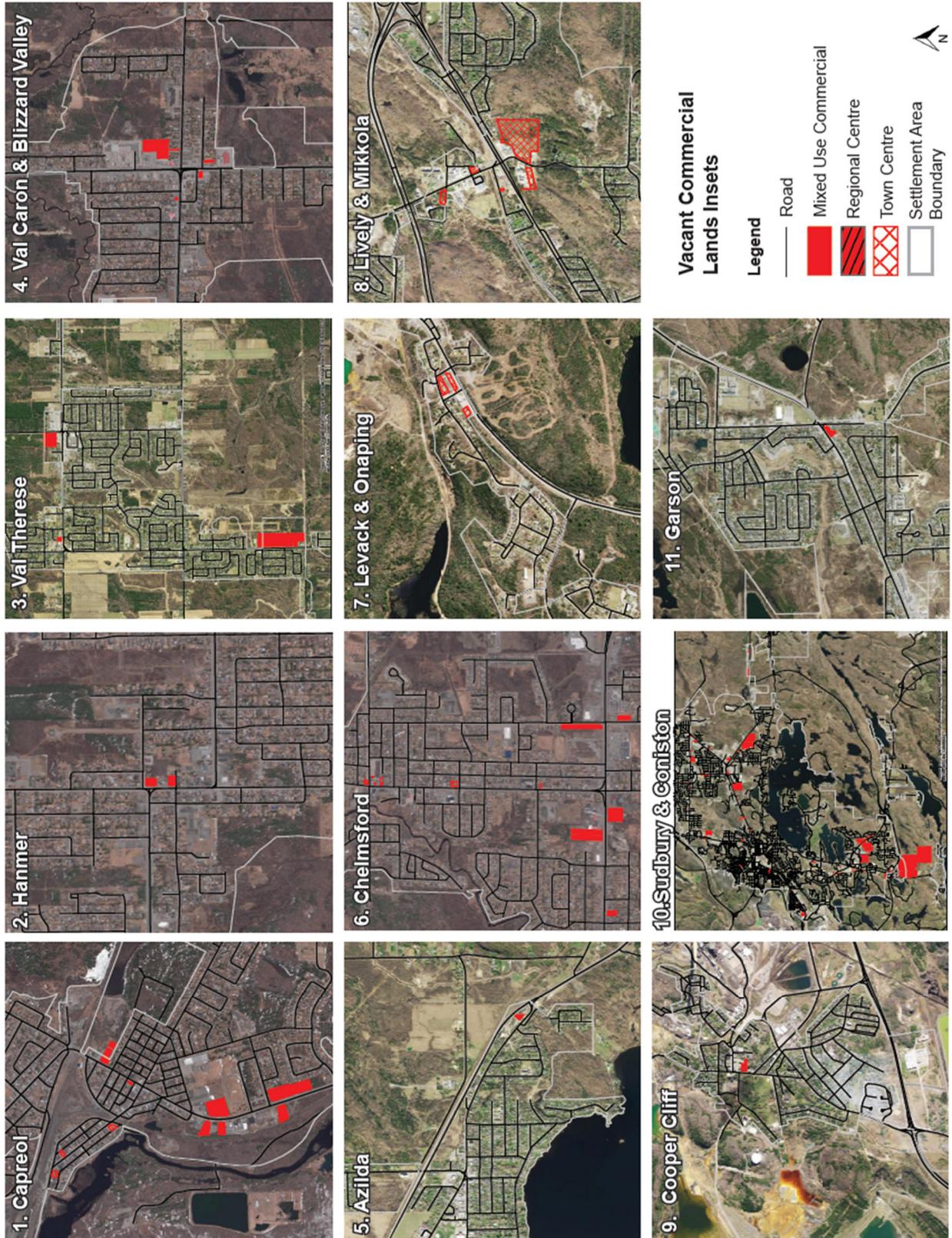
2.4.3 Vacant Commercial Lands Map – Overview

The following map identifies the vacant commercial lands across the city, by type (Mixed Use Commercial, Regional Centre, and Town Centre). Please refer to the insets on the following page.



2.4.4 Vacant Commercial Lands Map – Insets

The following map insets identify the vacant commercial lands across the city, by type (Mixed Use Commercial, Regional Centre, and Town Centre).



2.5 Shopping Centre Space

The Centre for the Study of Commercial Activity (CSCA) maintains an inventory of shopping centre space in major Canadian markets. In 2016, CSCA identified nearly 57 million m² of shopping centre space across the country, or 1.57 m² per capita. Canada's 28 Census Metropolitan Areas (CMAs) have on average 1.78 m² per capita – a higher figure, since major retail uses are concentrated in urban areas, rather than smaller, outlying communities. The Greater Sudbury CMA, with a 2016 population of 165,536, had 1.96 m² of shopping centre space per capita. This translates to a shopping centre inventory of approximately 324,500 m² for Greater Sudbury.

In a 2018 report, CSCA groups the 28 CMAs into five “clusters”, based upon shared economic and demographic indicators including population size, population growth rate, and personal income per capita. Greater Sudbury is clustered with Québec City, London, Oshawa, Windsor, Sherbrooke, Kingston, Saguenay, Trois-Rivières, Moncton, and Thunder Bay. These 11 CMAs mostly range in population from 100,000-400,000; have shopping centre space per capita ratios below or close to the overall CMA average; personal income below the overall average; and low population growth rates. These CMAs are characterized as traditional regional service centres originally established with respect to an agricultural or logging hinterland that now provide a full range of commercial, public administration, higher education, and health care activities.¹

ECONOMIC AND DEMOGRAPHIC INDICATORS BY CMA

Census Metropolitan Area	Population 2016	Population Annual Growth Rate 2014-2016	Personal Income per Capita	Shopping Centre Space per Capita (m ²)	Shopping Centre Space per \$Million Personal Income (m ²)
Québec City	807,211	0.67%	\$45,715	1.70	37.07
London	512,432	1.04%	\$42,363	1.90	44.78
Oshawa	393,977	1.30%	\$45,173	1.93	42.74
Windsor	340,279	0.88%	\$42,989	1.79	41.71
Sherbrooke	215,594	0.89%	\$40,191	0.99	39.20
Kingston	171,372	0.94%	\$44,655	1.69	37.81
Greater Sudbury	165,536	-0.08%	\$45,749	1.96	42.83
Saguenay	159,669	-0.18%	\$40,921	1.65	40.32
Trois-Rivières	157,764	0.48%	\$41,302	1.51	36.70
Moncton	149,744	1.14%	\$43,135	1.87	43.39
Thunder Bay	124,166	-0.33%	\$44,966	1.74	38.74
Cluster Mean (unweighted)	190,700	0.61%	\$43,378	1.76	40.51
28 Canadian CMAs (unweighted)	882,350	1.12%	\$45,951	1.86	40.69

Source: CSCA

Greater Sudbury exhibited a population growth rate (2014-2016) that was below the average for the 28 Canadian CMAs, including many of the other markets within the cluster. While this is true for the brief time period indicated (2014-2016), Greater Sudbury's population actually increased overall from 2011-2016 by approximately 1,620 persons, or 1.0% (source: Census of Canada).

¹ Shopping Centre Over-Spacing in Canadian Cities. Centre for the Study of Commercial Activity. 2018. p. 8.

Greater Sudbury’s personal income per capita is on par with the average for the Canadian CMAs, and above the average for the comparative markets. Notably, on a per capita basis, the amount of shopping centre space in Greater Sudbury is greater than the cluster mean, and the average figure for the 28 CMAs.

While CSCA remarks that there is evidence in their low growth rates and average incomes to suggest that the shopping centres in this CMA cluster might be susceptible to eCommerce impacts and could be considered “over-spaced”, they also note that there may be some further nuance with respect to retail space needs in the local markets that warrants further investigation.² For the purposes of this report, it can be concluded that the present shopping centre inventory in Greater Sudbury represents an over-supply risk – certainly relative to comparative markets – although retail trends such as declining store sizes and the increasing consumer adoption of eCommerce are topics that needs to be considered in greater detail in terms of growth management decision-making.

The following exhibit identifies the 22 largest shopping centres in Greater Sudbury, as identified in the Canadian Directory of Shopping Centres.

SHOPPING CENTRES IN GREATER SUDBURY				
Centre Name	Type	Year Opened	GLA (m²)	Major Tenant(s)
RioCan Centre Sudbury	Power Centre	1999	62,170	Costco, Home Depot, Cineplex, Staples
New Sudbury Centre	Regional	1957	52,736	Walmart, Sport Chek, Shoppers Drug Mart
Rainbow Centre Mall	Retail Mixed Use	1971	32,516	Hart, World Gym, Imagine Cinemas
Southridge Mall	Community	1981	30,658	Giant Tiger, TSC Stores, Sport Chek, Fabricland
SmartCentres Sudbury	Power Centre	2010	21,639	Walmart, Dollarama
Sudbury Place	Community	1981	17,835	Canadian Tire, Real Canadian Superstore
Silver Hills Centre	Power Centre	2009	13,935	Best Buy, Marshalls, Toys R Us
Place Bonaventure Mall	Community	1978	12,077	Your Independent Grocer, Hart
Place Val Est Shopping Centre	Neighbourhood	1983	10,273	Metro, Rossy
Lasalle Court Mall	Neighbourhood	1988	8,633	Metro
747 Notre Dame Ave.	Community	1998	8,451	The Brick, Staples, Dollarama
Notre Dame Square	Neighbourhood	1985	5,114	N/A
Garson Mall	Neighbourhood	1990	4,865	Foodland
Algonquin Square	Neighbourhood	1995	4,730	Smith's Markets
Cedar Pointe Plaza	Neighbourhood	1981	4,181	Bulk Barn
Four Corners Plaza	Neighbourhood	1979	3,962	Food Basics
Times Square	Neighbourhood	1975	3,918	N/A
Metro Plaza	Neighbourhood	1989	3,308	Metro
450 Notre Dame Ave.	Convenience	1984	3,298	N/A
Lasalle Street Plaza	Neighbourhood	1969	3,038	N/A
Lasalle Square	Neighbourhood	1989	2,602	N/A
1380 Lasalle Blvd.	Neighbourhood	1975	2,328	N/A
TOTAL			312,265	

Note: Major tenants verified using online sources August 28, 2020 (but subject to change).

² Shopping Centre Over-Spacing in Canadian Cities. Centre for the Study of Commercial Activity. 2018. p. 8.

2.6 Local Retail Market Perspectives

In June 2020, members of the Consultant Team completed market reconnaissance of the city's commercial areas. Our focus of interest was on the three Regional Centre areas, Sudbury's Mixed Use Commercial arterials, as well as the Downtown. The outlying Settlement Areas were not visited, although a desktop inspection of available mapping was completed. The following is a summary of key observations:

- The three Regional Centres each exhibit a very different character:
 - The Regional Centre in the north, at the intersection of Lasalle Boulevard and Barry Downe Road, is home to New Sudbury Centre – the largest enclosed regional shopping centre in Northern Ontario. It is situated directly across from Sudbury Place community shopping centre, creating a retail agglomeration. Beyond the Regional Centre's geographic limits, both Lasalle Boulevard and Barry Downe Road feature additional retail-commercial uses at various scales. This area appeared to exhibit a healthy level of occupancy (although a store-by-store inventory was not undertaken).
 - The Regional Centre at Kingsway and Silver Hills Drive/Barry Downe Road is a concentration of power centre-type uses – a spectrum of big box/small box retailers that are commonly found in markets across Canada. With few exceptions, these properties appeared to be well occupied at the time of our inspection. Undeveloped lands (designated Mixed Use Commercial) on the west side of Silver Hills Drive at Kingsway have the potential to expand upon this critical mass of retail-commercial activity.
 - The Regional Centre in the southwest part of Sudbury is home to Southridge Mall. This enclosed, community-scale shopping centre has major tenants including Giant Tiger, TSC Stores, Sport Chek, and Fabricland. However, there is presently a considerable amount of available space within the mall, which has seen turnover of its anchor tenants (formerly department store and grocery store uses). In contrast to the other two Regional Centres, this area – which extends beyond the mall site – has considerable land remaining for future development, as well as prospective redevelopment sites.
- The city's Mixed Use Commercial corridors exhibit a range of uses, including a significant amount of retail-commercial development. The following observations pertain to various areas we toured:
 - Lorne Street – A principal east-west arterial in the west part of the city, Lorne Street (between Kelly Lake Road and Martindale Road) features a mix of industrial, commercial, retail, and motel properties. There are also some houses that have been converted to commercial use. While the properties along the north side of Lorne Street are generally small, the greater depth of some properties on the south side would more easily facilitate future redevelopment, should such demand arise.
 - Regent Street and Paris Street/Long Lake Road – The Mixed Use Commercial environment in the vicinity of the Regional Centre at the Four Corners is a concentration of retail-commercial activity. There are a mix of freestanding properties, strip plazas, and neighbourhood-scale shopping centres.
 - Kingsway – The portion of Kingsway between Kitchener Avenue and Silver Hills Drive is home to numerous restaurants and automotive-related businesses, including new and used vehicle sales, service, and rental. The properties tend to be freestanding, rather than multi-tenanted plazas/shopping centres. The commercial mix also includes hotels in the vicinity of Silver Hills Drive, and further to the east.
 - Falconbridge Road – The Mixed Use Commercial corridor along Falconbridge Road, northeast of Kingsway, is more commercial in character, as opposed to retail and personal services functions. There are a few automotive-related uses in this area.

- Lasalle Boulevard – The principal east-west arterial across the north part of Sudbury, Lasalle Boulevard features a mix of land uses, including retail-commercial properties at all scales of development. A number of the shopping centres along Lasalle Boulevard were constructed in the 1970s and 1980s, with some newer freestanding properties completing the composition of this area, from a retail-commercial perspective.
- Notre Dame Avenue – The Mixed Use Commercial corridor from Lasalle Boulevard south towards Downtown includes restaurants, freestanding sites, strip plazas, automotive uses, and big box retail – a wide variety of retail-commercial uses.
- Greater Sudbury’s Town Centres are found in the Settlement Areas beyond Sudbury, and offer a range of retail-commercial uses at different scales that are guided by the size of the local population. Overall, there is only a limited amount of undeveloped land in the Town Centres category. The prospects for growth in the Town Centres will be dictated by future population increases in these communities, while recognizing that Sudbury itself will continue to be the dominant retail-commercial hub for the broader region.

2.7 Institutional Land Supply

2.7.1 Analysis of Institutional Land Supply

The city’s existing institutional lands accommodate a range of uses, including schools (elementary, secondary, post-secondary, and specialty uses); hospitals; nursing homes; other institutional residences; office buildings; a correctional facility; and others. These uses have varying site selection requirements, and are incorporated into the fabric of the community in different ways – some are campus settings, while others blend into the environment more seamlessly. Some of these existing sites may offer the ability to accommodate on-site expansion to meet future growth.

In reviewing the large land holdings of Laurentian University, Cambrian College, and Collège Boréal, all three sites offer excess lands that would be suited to accommodate future institutional and related development. In contrast, one of the city’s other large institutional sites – Health Sciences North, located at Paris Street and Ramsey Lake Road – appears to have limited capacity for expansion.

In our assessment of Institutionally-designated lands across Greater Sudbury, the Consultant Team has not identified any vacant sites available for future development.

2.7.2 Conclusions

The Consultant Team has observed that the city has no vacant (undeveloped) land specifically designated as Institutional to accommodate future needs – although certain Official Plan designations (such as Living Areas, where such uses are compatible with the residential function of neighbourhoods; Mixed Use Commercial; Regional Centres; Town Centres; and Downtown) permit institutional uses.

2.8 Downtown Land Supply

2.8.1 Analysis of Downtown Land Supply

The Consultant Team has identified a vacant land inventory of some 10 gross hectares across 79 individual sites in the Downtown. All of this land is serviced. Of these sites, 50 are surface parking lots. A total of 25 sites are surface parking lots used in conjunction with another property (1.9 hectares), while another 25 are parking lots not specifically associated with another property (3.4 hectares), which together total 5.3 hectares (or close to 50% of the vacant Downtown land supply).

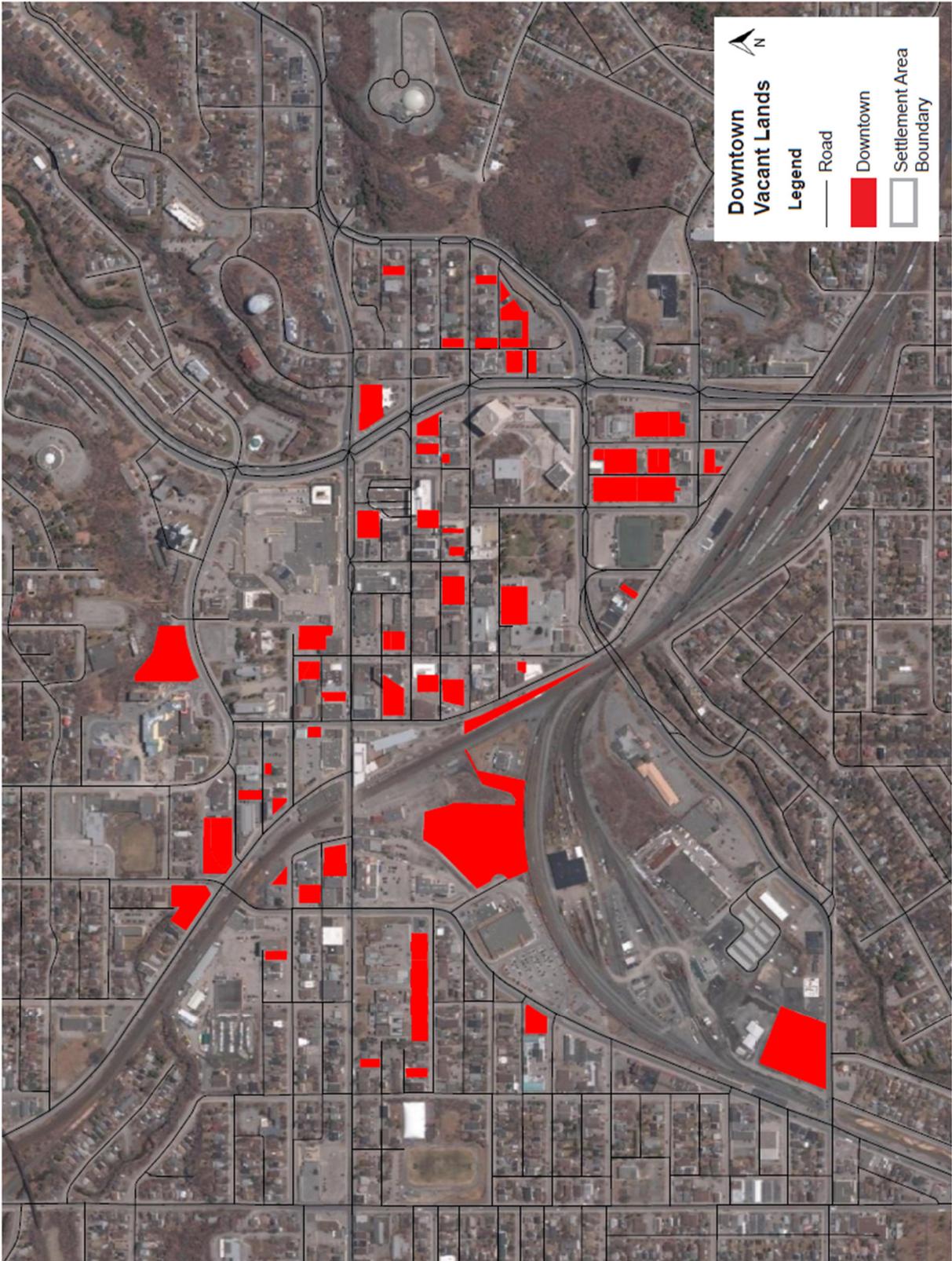
VACANT DOWNTOWN LANDS								
Official Plan Designation	Serviced		Partially-Serviced		Unserviced		TOTAL	
	# of sites	Area (ha)	# of sites	Area (ha)	# of sites	Area (ha)	# of sites	Area (ha)
Downtown	79	10.4	0	0.0	0	0.0	79	10.4
TOTAL	79	10.4	0	0.0	0	0.0	79	10.4

2.8.2 Conclusions

In general, the vacant Downtown lands are very small parcels – 70 of the 79 sites are less than one-quarter of a hectare. While there are certainly sites that have the potential for future development, parking needs will have to be addressed, and it may be necessary to assemble multiple parcels (occupied and vacant) in order to execute a significant development/redevelopment project.

2.8.3 Vacant Downtown Lands Map

The following map identifies the vacant Downtown lands.



3.0 TRENDS ANALYSIS

3.1 Office Sector Trends

3.1.1 Prevailing Trends in the Office Market

An important factor when contemplating the amount of future lands required to accommodate long-term office space demand is the densification of office space. This is a reference to the changing office workplace environment, which (pre-COVID-19) had been seeing a persisting trend towards smaller allocations of space per employee. This was driven by several factors, including:

- more efficient office building design, allowing greater utilization of floor plates;
- higher occupancy costs (net rental rates, operating costs, and taxes), contributing to a reduced space allocation on a per employee basis by firms;
- adoption of technology, enabling mobile and off-site productivity, as well as reducing paper filing and storage requirements; and,
- increased telecommuting and desk sharing practices among co-workers.

Greater Sudbury’s public and private sector office space is principally located in the Downtown area, along with a significant Canada Revenue Agency/Sudbury Tax Services Office building at 1050 Notre Dame Avenue. From a site selection perspective, the following characteristics are of importance:

- Access to an educated workforce – Greater Sudbury’s post-secondary facilities are a vital source of skilled workers for local businesses.
- Desire for mixed use/“urban” environments – office occupiers that are seeking to attract employees in the competitive jobs market recognize that offering a workplace with proximity/accessibility to restaurants/bars, retail opportunities, recreation spaces, and a high-quality public realm, is critical.
- Public transportation accessibility – in many urban areas, opportunities to travel via public transit is becoming an increasingly important option as an alternative to auto-oriented commuting. However, this dynamic is not as prevalent in Greater Sudbury compared to other metropolitan markets, due to the size of the city, and the ease of commuting by private vehicle.

3.1.2 Perspectives on COVID-19

Cushman & Wakefield’s Chief Economist and Global Head of Research and team have authored significant content related to the COVID-19 crisis, and the recovery process. As a worldwide firm, Cushman & Wakefield has unique insights from all parts of the globe, which are experiencing different phases of the pandemic. In this section of the report, we have extracted segments from several research reports and “white papers” that discuss aspects of the pandemic, and the associated impact on office markets.

- “In the near term, while retail and hospitality will be hardest hit, office demand will be restrained as well. Rising vacancy is likely to suppress office rent growth until business confidence and activity is restored.”
- “Office occupiers may pause on expansions in the near term until the services sectors prove their resilience in the face of weaker near-term global demand.”

- “The brief surge in remote working should not, on its own, cause office vacancy rates to rise significantly right away. It is important to note that 91% of all office leases are 2 years in length or longer; thus, even though many office buildings are sitting empty now, they are still leased. That said, clearly there is significant disruption occurring in every sector of the economy, including the office sector. We expect absorption, both gross and net, to slow substantially world-wide and turn negative in many markets. In terms of vacancy and rents, both are strongly correlated with the unemployment rate; it will be a key metric to watch going forward – including the trajectory of the improvement during the recovery.”
- “Many occupiers and landlords are in ‘wait-and-see’ mode. Companies are distracted by the impact to current operations, and focused on figuring out how to deal with remote workers, closed locations, and disrupted supply chains.”
 - After the initial disruption to business while transitioned to the stay-at-home environment, many/most employees successfully adapted to new modes of work. There is growing discussion on the extent of how permanent the work-from-home potential could be among various industries that use office space.
- “The crisis may lead to a changed perception of work-from-home. In many cases, organizations that have never had any (or any significant portion of) employees work remotely have been doing so due to shelter-in-place orders. However, it is likely that most workers will continue to access office space on a regular basis, even if they increase the frequency of remote work.”
 - The importance of social interactions was highlighted during the mandatory work-from-home paradigm. Opportunities for learning and collaboration are also quite different at home versus in a communal office environment.
 - There is some sentiment that a shorter-term mandated work-from-home period would primarily reveal the upside of this lifestyle. However, in a prolonged state, the ‘pains’ of working from home become apparent, with many employees seeking to return to office space.
- Post-pandemic... “There will be exploration of the ‘office workplace ecosystem’, including primary office space, co-locations, flex spaces, and work-from-home arrangements.”
- “Some occupiers are considering shorter-term leases during a period of increased uncertainty, and are requesting to investigate ‘blend and extend’ leases, or are asking to renegotiate terms.”
 - Tenants are pausing decisions on new lease commitments and plans for expansion until economic and market dynamics are better understood, and a path forward is clearer.
- “An anticipated rise in vacancy is likely to suppress office rent growth until business confidence and activity is restored. If this vacancy comes in the form of considerable sublet space in addition to headlease space, then this is problematic; it would prolong the downward pressure on rents, and make new construction even less likely.”
 - Office vacancy and rents are strongly correlated with the unemployment rate. If job losses go from temporary to permanently destroyed, then the rise in the unemployment rate will be longer-lasting, causing vacancy to rise.
- “Availability of sublease space is a sign of softness in the market, as occupiers look to cut costs and offload excessive space. This is where vacancy will show up first.”
- “Office space planning/layouts may go through a transition in thinking. The trend towards shrinking space per worker (‘densification’) may reverse, to enable increased physical distancing. As well, the frequency of work-from-home may increase, and non-assigned desk office environments (‘hotelling’) may become more prevalent.”

- “From a corporate real estate perspective, some larger firms may re-evaluate their centralized strategy (one central office) and transition to a more decentralized structure (multiple offices – perhaps a Downtown HQ with several smaller Suburban offices), in order to allow suburban-living employees to live closer to work, to give employees more options about where to work, and to mitigate risk of office closures/downtime.”
 - The “centralization” strategy is underpinned in a belief that office densification and hotelling would help offset higher rent costs associated with Downtown locations versus the Suburbs. While true, if there is a reversal of the densification trend, then the occupancy cost savings disappear. Thus, Suburban office demand could be reinvigorated.
 - Some firms may seek to become owners and sole occupiers of their building, or single-tenants in a new design-build, in order to control all aspects of their premises (entry, elevators, etc.).
- “From a market trends perspective, an acceleration of work-from-home office-type employment would place downward pressure on office space demand, while a reversal in the densification of office space toward more allotment of space per worker has the counter-effect.”

In summary, there is split sentiment about this asset class, from the perspectives of space demand and land needs. The effect of the competing forces of increasing work-from-home and hotelling (leading to less office space demand) versus a greater allocation of space per office worker (leading to increased space demand) must be closely monitored going forward. Most surveys indicate a larger share of office workers will permanently work from home. Similarly, we’ll see a larger agile worker population – people who work remotely at least some of the time.

Opportunities for knowledge spillover, innovation and creativity, employee bonding, culture/brand, mentoring and training, productivity, and more, are reasons that office real estate will continue to play a vital role in the way organizations work and grow. Ultimately, office workplace and market demand dynamics will evolve as a result of the crisis.

3.2 Industrial Sector Trends

3.2.1 Prevailing Trends in the Industrial Market

Demand for the conversion of lands within designated employment areas to other uses is an ongoing issue faced by many municipalities. The nature of employment continues to evolve away from a historic manufacturing base to a more service-based economy. In permitting the conversion of employment lands to a non-employment use, these lands are highly unlikely to revert in the future back to an employment use; they are “lost” forever. A land supply to meet residential growth targets (plus lands needed to accommodate retail-commercial uses) is sufficiently available (or can be accommodated) in locations designated and planned for such uses. Therefore, a municipality must carefully weigh the benefits and drawbacks of any proposed industrial land use conversion, in order to maintain/preserve sufficient lands to accommodate anticipated long-term industrial employment demand.

The amount of industrial floor space per worker continues to increase. The growing adoption of automation is impacting traditional manufacturing employment. In some markets – although far less pronounced in Greater Sudbury – warehousing and distribution is the dominant component of growth, and it has a relatively low employment density. Due to their large building footprint (and accordingly, land cost), warehousing and logistic uses are typically attracted to large sites on the urban periphery, which feature ready access to multiple highways. The taller ceiling clear height found in modern industrial buildings means that floor space is being replaced by vertical space – without a corresponding increase in a requirement for labour.

Municipalities should encourage a range of parcel sizes, locations, and timing/levels of servicing of employment lands, in order to be responsive to occupier and developer requirements. Having an adequate supply of serviced lands can act to suppress land price inflation, by ensuring choice in the marketplace, and enabling multiple market participants (not just a small group of dominant landowners/investor). If there is too limited a supply, or an insufficient range of choices of location/size, then occupiers will look elsewhere. Industrial developers are sensitive to land pricing – it is a key component of their development pro forma model – and they will seek markets that provide lower cost options (which generally coincides with movement from the core towards the urban periphery, or beyond).

Older industrial areas with buildings that no longer meet the requirements of contemporary business (i.e., properties with lower ceiling clear height, a less functional site layout for truck movements/distribution, etc.) may convert over time to alternate uses – although there is uncertainty and complexity in anticipating the adaptive re-use of employment lands. While this may displace/replace industrial-type employment, such adaptive re-use of buildings could include more office-type functions – particularly firms seeking low-cost environments that do not need conventional office space (such as high-tech start-ups, and other “new economy” uses). Regeneration and intensification within older, established industrial areas can play a part in unlocking future employment potential. Providing flexibility in planning policy (such as permissive zoning, context-appropriate parking standards, etc.) to accommodate alternative, compatible uses will be important in attracting such opportunities for intensification of employment within established business parks, as opportunities arise over time.

3.2.2 Perspectives on COVID-19

In the following section, we have extracted segments from several Cushman & Wakefield reports and “white papers” that discuss aspects of the COVID-19 pandemic, and the associated impact on industrial markets.

- “The globe’s industrial-logistics sector was booming before this crisis – net new leasing activity, rents, construction activity, and occupancy levels were at record highs. Given the pandemic’s impact on global trade, we expect some near-term headwinds. Longer-term, COVID-19 is accelerating the shift to eCommerce out of necessity. That may induce some longer-lasting behaviors in consumers. We expect the industrial-logistics sector to come out of this period stronger than ever.”
- “The outlook for logistics remains unadjusted, as eCommerce continues to expand structurally, and supply chains are reorganized to enable faster and more cost-efficient delivery. Even before the pandemic, the growth of online grocery sales was driving demand for cold storage warehouses.”
- “Many industrial development projects have been put on hold, as developers and investors take a ‘wait-and-see’ approach to the market and economy. However, the industrial sector entered the crisis with extremely robust fundamentals, and is positioned to weather the pandemic better than most other product types.”
- “Vacancy is likely to increase, but remain extremely tight relative to historical precedents.”
- “Occupier demand was very strong pre-COVID-19. How quickly will this disappear? There may be a halt in the rapid pace of rental rate growth seen in some markets until the economy stabilizes and rebounds. This could impact prospects for new construction for a period of time – particularly speculative building (a developer commencing construction without a lease commitment already in place).”
- “Although anticipated to be more resilient than the office or retail sectors, industrial real estate has seen challenges related to supply chain shortages. Also, a meaningful amount of industrial space is occupied by retailer/wholesalers, many of which are struggling.”

- “The crisis may lead to an increase in domestic production of ‘mission-critical’ things – particularly linked to the health care sector. Improved supply chains are also identified as an area for future improvement.”
 - Rebirth in the manufacturing sector in any form would be a good news story.

In conclusion, the majority view is that industrial is likely to perform best among the three core commercial real estate classes (office, industrial, and retail) during both the downturn and the recovery period. Potentially, space demand could even surpass the pre-COVID floor space projections on the upside, due to eCommerce and other logistics-related opportunities, and any manufacturing renaissance that might emerge.

3.3 Retail Sector Trends

3.3.1 Prevailing Trends in the Retail Market

The retail sector is a constantly evolving business, with changing store formats, shopping centre formats, anchor tenant brands, and consumer behaviour. The arrival and abrupt departure of Target; the continued expansion of Walmart; the demise of Sears and Zellers; the entry of new US department stores; ongoing consolidations in the grocery segment (Sobey’s acquiring Canada Safeway; Loblaw acquiring Shoppers Drug Mart); Leon’s acquisition of The Brick – these are a few of the significant changes seen across Canada’s retail landscape in just the past several years.

Shopping centres constitute the major supply-side channel for the delivery of goods and services to consumers. In Canada, shopping malls emerged in the latter half of the 1950s, and challenged the long-standing dominance of stores in strips, and historic downtowns. By the end of the 1960s, sales activity in shopping centres exceeded those in stores on strips.³

With retail activity along retail strips giving way to malls and plazas in the 1960s, the next innovation in retail real estate took place in the 1990s with the onset of big box and power centre format shopping centres – highlighted in Canada by the entry of Walmart – which slowed the development of traditional shopping centre format development. Stores in categories such as furniture and home furnishings, electronics and appliances, general merchandise, and others located in neighbourhood, community, and regional-scale shopping centres began to experience severe pressure in the face of competition from freestanding stores operating in a big box format, or in a power centre cluster.⁴

In Greater Sudbury, among the largest shopping centres in the market today are some of the newest additions, by year opened (SmartCentres Sudbury [2010], Silver Hills Centre [2009], and RioCan Centre Sudbury [1999]) – all power centre-format developments. Notably, some of the city’s largest shopping centres are also among its oldest retail-commercial stock (New Sudbury Centre [1957], and Rainbow Centre Mall [1971]). Among Greater Sudbury’s 22 largest shopping centres, 45% of the inventory was built during the 1970s and 1980s, and close to one-third was added from 1999-2010.

The most pressing current trends impacting retail real estate relate to the rapid adoption of eCommerce and the transfer of shopping centre sales to the online marketplace. This is linked with an associated decline of store sizes, as retailers adapt to evolving conditions. A number of big box retailers are exploring smaller sized box stores, due to concerns over productivity, and underutilized square footage. Also, smaller format stores are more compatible in urban environments when seeking infill sites, as prime sites are not as readily available (or in the case of higher land costs – unaffordable).

³ Assessing Shopping Centre Space Needs in Canada. Centre for the Study of Commercial Activity. 2018. p. 1.

⁴ Assessing Shopping Centre Space Needs in Canada. Centre for the Study of Commercial Activity. 2018. p. 2.

The following trends are related to changing online shopping behaviour, which will impact demand for “bricks and mortar” retail space in the future:

- Increase in Online Sales – Pre-COVID-19, Deloitte had projected that by 2030, eCommerce will comprise 30% of all retail sales – up from around 10%. This is attributable to the popularity of smartphones and tablets.
- Shopping with Mobile Devices – Consumers have embraced online shopping, and savvy retailers are pursuing new ways of engaging with mobile shoppers, such as applications (apps) that track consumer locations in proximity to their stores within a shopping centre (using the GPS functionality of the mobile device) and offer targeted promotions – even based upon previous buying experiences.
- Showrooming – Online-focused retailers may open small store locations in shopping centres or other locations to showcase various products, and allow consumers to experience the merchandise – see it first-hand, try it on – but ultimately place an order electronically. The shopper does not leave with the merchandise; it is shipped directly to their home. In this eCommerce era, people are already conditioned to receiving product through the mail/by courier.

Overall, these trends point to changing consumer behaviours that will likely translate into a reduced amount of shopping centre space per capita going forward. Online shopping has emerged as a necessary sales channel for many retailers – one that is gaining increased attention and investment. While shopping will remain an experience, eCommerce is ultimately about convenience. The outlook for Greater Sudbury is a likely decline in the amount of physical shopping centre space per capita over time, along with the closure of under-performing store locations. Shopping centres are commonly a focal point and entrenched element of a neighbourhood/community, and they are invariably well located. In the future, there may be an opportunity to transform some of these more distressed assets into mixed use redevelopment sites combining retail-commercial space with other uses, including residential. While this will not dramatically reduce the need for new greenfield residential growth in the city, it may present some opportunities to capitalize on centrally-situated sites for medium and higher density forms of residential development.

3.3.2 Perspectives on COVID-19

The following section includes retail-market focused perspectives on the COVID-19 crisis that have been extracted from several Cushman & Wakefield research reports and “white papers”.

- “This event is likely to accelerate a trend that was already in the making: the secular shift toward eCommerce, which continues now at a faster pace. Certain aspects of the retail sector will now be more severely challenged, and we will see more store closures as a result. There’s currently plenty of negative press about the retail sector, so rather than pile on, here are a few positives. Consider this: prior to this event, brick and mortar stores in Canada accounted for ~90% of total retail sales, and eCommerce just ~10%. So physical retail was still by far the dominant way people shopped. Certain concepts are going to survive this and will thrive. In fact, the retail sector is always evolving due to quickly changing consumer tastes and preferences. If any sector knows how important it is to adapt, it is retail. When this is over, people will be chomping at the bit to go out and shop, eat, play, and exercise.”
- With regard to eCommerce activity... “The necessity of shelter-in-place is accelerating the long-term shift to eCommerce. It is currently the only channel connecting with consumers for many categories of retail. The pandemic is likely to induce some longer-lasting behaviors in consumers.”
- “The economic downturn will favor value: dollar stores, discounters, warehouse clubs, and lower price superstores.”

- “Necessity retail (i.e., grocery, convenience, and drug stores) will be a bright spot; such sales have surged recently. The near-term economic impact of the crisis means that consumers will be focused on value and essentials – both in-store and online.”
 - Although not noted in this report, this is also true of beer-wine-liquor sales – given the decline in spending in bars and restaurants.
 - Overall discretionary-type spending may be impacted for a prolonged period of time – particularly among individuals who have lost their job, and have scaled back purchases in order to prioritize food buying and mortgage/rent payments.
- “Fast food chains quickly ramped up ‘contact-less delivery’ and pickup strategies to adapt.”
 - This is also true of the grocery sector. The long-term effect of this will be of particular interest – and potentially transformative.
- “Many retailers already struggling with high debt loads will not survive the crisis. The pandemic is also accelerating the ongoing demise of the weakest shopping centres and malls.”
 - It is premature to ascertain the impact of the COVID-19 crisis and economic downturn on retail vacancy. There will be winners and losers in different retail categories. But this will be the “last straw” for some businesses that were already in a precarious position, following up significant retail bankruptcies and store closures that have taken place in recent years.
- “Enclosed malls are being hit much harder than outdoor centres, many of which have been able to remain open due to their concentration of ‘essential’ retailers.”
 - The clothing/apparel, entertainment, and restaurant/food court focus of many enclosed shopping centres is not aligned with shopping patterns seen during the crisis, with those tenancies listed being more oriented towards discretionary purchases.
- “Social distancing will temporarily halt some of the hottest trends in physical retail: experiential concepts, entertainment, food and beverage, food halls, fitness clubs, upstart independent brands, digital native retailers, and pop-up stores.”
- “Retail is moving from being a standalone shopping destination to becoming the ultimate amenity in live/work/play communities. The pandemic will accelerate the ongoing trend of malls and shopping centres adding mixed use elements.”

Some retailers will face un-budgeted expenses associated with changing their in-store architecture, in order to facilitate social distancing as public health-mandated restrictions are lifted. On a positive note, circumstances such as the current downturn present a rare opportunity for a landlord to reposition a property, upon the (previously unanticipated) departure of a major tenant. While seen as important drivers of consumer traffic, to some degree the typically long-term nature of retail anchor/major tenant leases can also encumber a property owner’s ability to actively manage the asset over time.

The pandemic has had an immediate and profound impact on the retail sector, with many “non-essential” businesses suffering from a dramatic loss of income. The transition to online sales will accelerate even faster than the pace it had been on pre-crisis, and is probably the single biggest factor with respect to long-term demand for retail real estate. Sadly, there will be long-lasting/permanent effects for some businesses, with store closures and bankruptcies appearing inevitable (of course, some businesses were already at a critical tipping point pre-downturn).

3.4 Non-Residential Building Permit Activity

The Consultant Team reviewed building permit data provided by City staff for the period from January 2011 through June 2020. Over this time period, nearly 400 non-residential permits were issued across the City of Greater Sudbury, within the parameters of importance to our analysis. We have classified the permits into four categories: Commercial, Industrial, Institutional, and Civic & Cultural. Examples of these uses are as follows (note – we have identified that there is some overlap among the Institutional and Civic & Cultural categories within the building permit dataset):

- Commercial – Restaurant, auto dealership, fast food, offices, hotels and motels, medical offices, banks/financial institutions, shopping centre/mall/plaza, service station, supermarket, etc.
- Industrial – Manufacturing, storage, industrial plant, industrial supplies, contractor’s yards, etc.
- Institutional – Elementary schools, secondary schools, college and university, hospitals, nursing homes, special schools, etc.
- Civic & Cultural – Cemeteries, airport, racetrack, municipal yard, arenas, libraries, government offices/civic buildings, courthouse, etc.

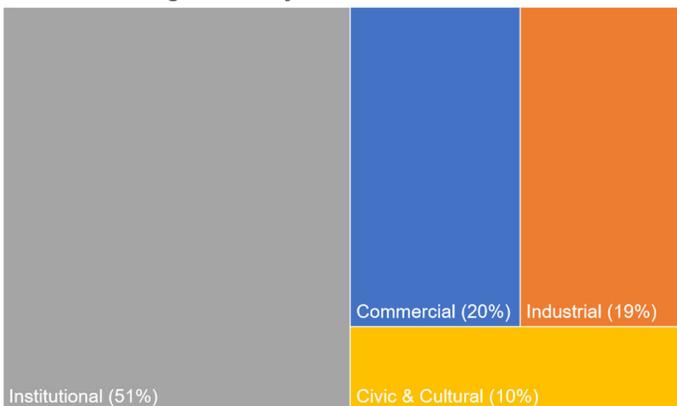
The following are notable observations from our analysis:

- New building permits (\$384 million) accounted for nearly one-half of the total permit value during the 2011-2020 period, but represented just one-third of total permits, by count of permit.
- Permits for additions to existing properties – reflecting reinvestment in the stock of non-residential buildings – totaled \$403 million, and accounted for nearly one-half of all permits, by count.
- By count of permit, the Commercial and Industrial categories each accounted for a 36% share of total permits, followed by Institutional (19%), and Civic & Cultural (10%).

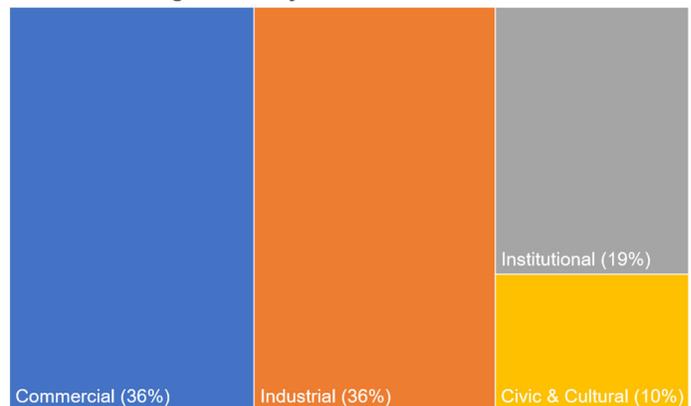
VALUE AND NUMBER OF PERMITS BY LAND USE								
Building Type	New Structure		Addition		Ancillary Structure		Total	
	Value (\$Millions)	#	Value (\$Millions)	#	Value (\$Millions)	#	Value (\$Millions)	#
Commercial	\$108.1	48	\$49.0	72	\$0.5	18	\$157.6	138
Industrial	\$89.8	57	\$55.7	63	\$3.9	16	\$149.4	136
Institutional	\$109.5	15	\$296.2	43	\$1.3	14	\$407.0	72
Civic & Cultural	\$76.3	10	\$2.1	5	\$2.9	22	\$81.3	37
TOTAL	\$383.7	130	\$403.1	183	\$8.5	70	\$795.3	383

Source: City of Greater Sudbury and Cushman & Wakefield

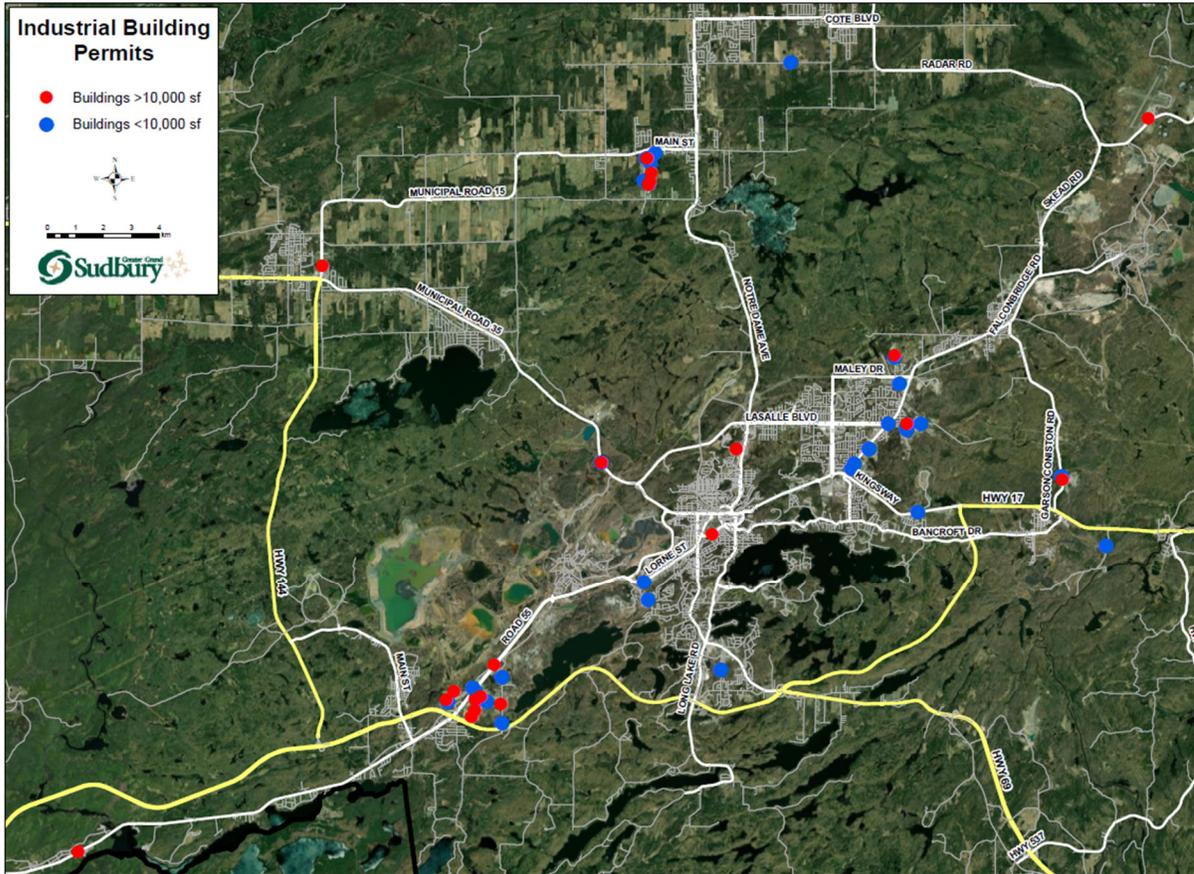
Building Permits by Land Use – Value of Permits



Building Permits by Land Use – Count of Permits



The map below illustrates the location of new industrial building permits issued from 2011-2019. While there is a clear concentration of activity in the vicinity of Fielding Road/Mumford Drive (the Fielding Road/Duhamel Road industrial area, as discussed later in this report), there are new industrial building permits in locations across the city.



4.0 POPULATION AND EMPLOYMENT PROJECTIONS

4.1 Introduction

In 2018, Hemson Consulting Ltd. provided the City of Greater Sudbury with a projection of population and employment growth, in a report entitled *Outlook for Growth to 2046*. These forecasts are used in the City's Development Charge Background Study, and City staff directed the Consultant Team to rely on these figures for the purposes of this Employment Land Strategy. Notwithstanding that these projections predate the COVID-19 crisis – the lasting impacts of which are still not fully understood – the Consultant Team is of the view that the long-term nature of these forecasts means that they can still be relied upon for growth management purposes.

4.2 Overview of Scenarios

Hemson developed three forecast scenarios: a Reference Scenario – which is considered the baseline projection – and Low and High Scenarios which adjust growth assumptions to provide a broader range of outcomes. In the *Outlook for Growth to 2046 report*, it is noted that the Reference Scenario represents the most likely outcome considering local and broader demographic and economic factors. The Low and High Scenarios are included to illustrate the sensitivity of long-term growth prospects to changing economic conditions and migration trends.

The three different growth scenarios are described as follows:

- The Low Scenario reflects the most recent Ministry of Finance projections (at the time of the report), which are heavily influenced by a continuation of the out-migration of young adults, and limited prospects for economic growth. This scenario illustrates the city essentially maintaining its present population and employment levels over the forecast period (the population declines slightly from 2021-2046, while employment increases only modestly).
- The Reference Scenario reflects more recent trends indicating a mitigation of the out-migration of young people, the influence of currently committed investments in the mining industry, and some increase in the service/administrative functions that the city provides the broader region. This scenario is predicated on modest growth in the residential and non-residential sectors. The Reference Scenario assumes anticipated investments in the mining and institutional sectors occur as planned. However, if there was a shock to commodity prices or an economic slowdown similar to the recession that occurred between 2007 and 2009, the Reference Scenario forecast may be difficult to achieve. In this scenario, employment growth outpaces population growth during the 2021-2046 period.
- The High Scenario increases the share of the population represented by young adults, and adds to the economic outlook of the Reference Scenario by incorporating influences from investment in the Ring of Fire area. The High Scenario was developed to test the effects of significant changes to in-migration that would lead to a larger share of young adults. This represents a best case outcome reflecting substantial influence from Ring of Fire investment, and leads to much higher population and employment growth rates than recent trends would generate – with population growth occurring on par with employment growth from 2021-2046 (our forecast horizon).

The Consultant Team notes that the COVID-19 health and economic crises represent the type of “shock” that is referenced in Hemson’s description of the Reference Scenario. However, given that the horizon of this forecast is 25+ years, we remain comfortable relying on these population and employment projections to inform our employment land demand modeling. Further, the population and employment forecasts that are maintained by metroeconomics closely approximate Hemson’s Reference Scenario. Accordingly, the Consultant Team is comfortable endorsing this outlook.

The population projections prepared by Hemson have been adopted by the Consultant Team. The employment forecast contained in the *Outlook for Growth to 2046* report is at an aggregate level, by place of work. Accordingly, it was necessary for metroeconomics to translate this into a projection of employment growth by industry, using North American Industry Classification System (NAICS) codes, which are presented at the two-digit level in the exhibit below. For 2020 and 2021, metroeconomics has made adjustments to total employed to reflect the anticipated impact of COVID-19 in those years. From 2022-onward, it has been assumed that the projected level of employment will prevail. Longer-term, it is expected that pandemic impacts would be minimal, perhaps affecting job locations as opposed to industry growth totals.

4.3 Our Approach to Employment by Industry Projections

The population growth of an area typically depends on its growth in “economic base” employment, while an area’s growth in “community base” employment depends on its population growth. In recognition of this interdependence between population and employment growth, metroeconomics has developed a community-based projection system that takes account of the economic and demographic factors influencing an area’s growth potential.

The economic base of the community is identified through the de-composition of local jobs on a place of work basis by industry into those that are economic base jobs and those that are community base jobs; this is achieved using a location quotient process (which is described in detail below). Economic base industries produce goods and services consumed primarily by businesses or people outside of the local community; these industries – also called export-based industries – produce agriculture, mining, or manufactured products for consumption elsewhere, or provide tourism or higher-order education/health care services to visitors/temporary residents.

The potential for growth of a local community’s economic base jobs is identified through assessing how many such jobs exist today, and how many might exist in the future, drawing on metroeconomics’ extensive forecasts of economic base industrial job trends nation-wide and province-wide. An assessment is also made of the potential for local residents to commute to jobs in nearby employment locations, drawing on existing patterns and on metroeconomics’ base case forecasts of such jobs by sub-provincial area across the country. The potential for job growth within the local area and in nearby locations determines the potential for job growth among local residents.

The metroeconomics system ties this resident job growth potential to the demographic side of the community; if potential job growth among residents exceeds the current supply of workers (based on an age and gender assessment of the current population, age-specific rates of labour force participation, the level of unemployment, and the need to replace retiring workers), in-migration occurs; thus, job growth potential determines population growth potential, recognizing that each new job-holding resident typically brings along one or two dependents. The system further takes into account the fact that each new resident job-holder increases the need for workers who service the local population – the community base jobs – and that these additional community base jobs, in turn, create the need for more workers, more residents, etc. The growth in employed residents, in other words, drives the community’s net in-migration requirements which, along with standard assumptions regarding fertility and mortality rates, provide the parameters needed to develop local area population projections by age and gender.

Projected economic base jobs by industry are added to projected community base jobs by industry to determine the total number of jobs by place of work that will exist in the community in the decades ahead. All jobs in agriculture and forestry, in mining and oil and gas extraction, and in manufacturing, are considered to be economic base jobs, as most of their production is consumed by businesses and people outside of the area. For all other industries, the number of jobs per 1,000 residents in Greater Sudbury is compared to that ratio province-wide. Where the ratio in an industry in Greater Sudbury exceeds that of Ontario, it is assumed the excess jobs in the city are providing services to people or businesses outside of Greater Sudbury. These excess jobs are defined as export-based service jobs, and their output as exportable services.

Of the 70,230 jobs in Greater Sudbury (total employment by place of work) in 2016, 15,590 (22%) were export-based jobs, while 54,640 (78%) were community-based. The industries accounting for the greatest number of export-based jobs in 2016 were mining, oil and gas (5,615), manufacturing (3,200), health and social services (2,939), government (1,302), retail trade (910), and education (704). These six industries together accounted for almost 95% of the export-based jobs in Greater Sudbury.

EMPLOYMENT BY PLACE OF WORK – LOCATION QUOTIENT ASSESSMENT 2016							
Category	Greater Sudbury		Ontario		Difference – Greater Sudbury less Ontario	Greater Sudbury	
	#	# Per 1,000	#	# Per 1,000		Economic Base	Community Base
Total Population (persons)	166,130		13,448,494				
All Industries EPOW (jobs)	70,230	423	5,867,270	436	-13	15,590	54,640
Agriculture, forestry	370	2	88,450	7	-5	370	0
Mining, oil and gas	5,615	34	24,705	2	32	5,615	0
Utilities	390	2	43,785	3	-1	0	390
Construction	3,135	19	213,400	16	3	499	2,636
Manufacturing	3,200	19	624,260	46	-27	3,200	0
Wholesale trade	2,250	14	238,335	18	-4	0	2,250
Retail trade	9,650	58	707,530	53	5	910	8,740
Transportation, warehousing	2,270	14	232,090	17	-3	0	2,270
Information, culture	980	6	153,455	11	-5	0	980
Finance, insurance, real estate, leasing	3,350	20	483,235	36	-16	0	3,350
Professional, scientific, technical	3,505	21	497,790	37	-16	0	3,505
Other business services	2,325	14	234,280	17	-3	0	2,325
Education	6,395	38	460,690	34	4	704	5,691
Health, social services	11,340	68	680,110	51	17	2,939	8,401
Arts, entertainment, recreation	1,120	7	119,330	9	-2	0	1,120
Accommodation, food	5,245	32	420,400	31	1	52	5,193
Other services	2,990	18	257,000	19	-1	0	2,990
Government	6,100	37	388,425	29	8	1,302	4,798

Note: "EPOW" = Employed by Place of Work

Hemson’s Reference Scenario is in alignment with metroeconomics’ view of the Canadian economic outlook as a whole, adjusted to reflect the dynamics of Greater Sudbury’s local economic base by industry (and linked to Hemson’s overall employment projection). The Low and High Scenarios are also linked to Hemson’s employment projections, which vary the outlook for growth.

4.4 Population and Employment Growth Projections

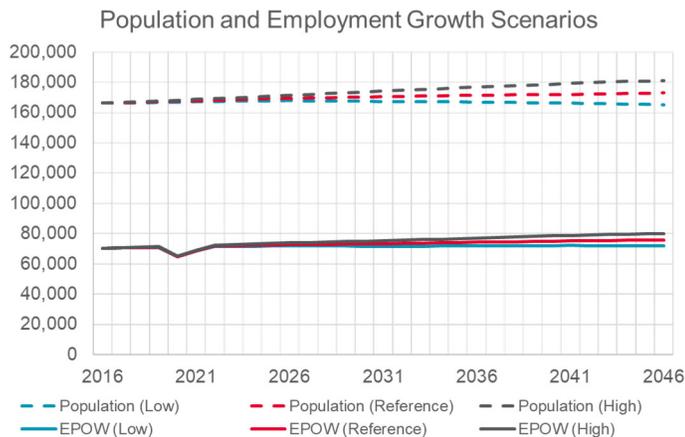
The City of Greater Sudbury had a population of 166,130 in 2016. Based on Hemson’s projections, the city’s population in 2046 may range from a low of 165,090 (Low Scenario), to a mid-range total of 172,990 (Reference Scenario), or even to a high of 181,290 (High Scenario), should economic conditions and migration to the city – notably by young adults – significantly change.

- For the purposes of our analysis, we will rely upon the estimated 2021 population in each of the scenarios, which ranges from a low of 167,130 to a high of 168,720.

The City of Greater Sudbury had total employment of 79,440 jobs in 2016. According to Hemson’s outlook, by 2046, total employment could grow modestly to 81,230 (Low Scenario), increase to 85,750 (Reference Scenario), or possibly as high as 90,460 jobs (High Scenario).

- As noted above, metroeconomics has adjusted anticipated total employment for all three scenarios in 2020 and 2021 to account for the impacts of the COVID-19 crisis; the figures for 2021 are used as the starting point for our land demand forecasting. As well, metroeconomics has identified total employment by place of work, which excludes jobs with no fixed workplace address (employment by place of work is more useful in undertaking land demand analysis, rather than total employment).

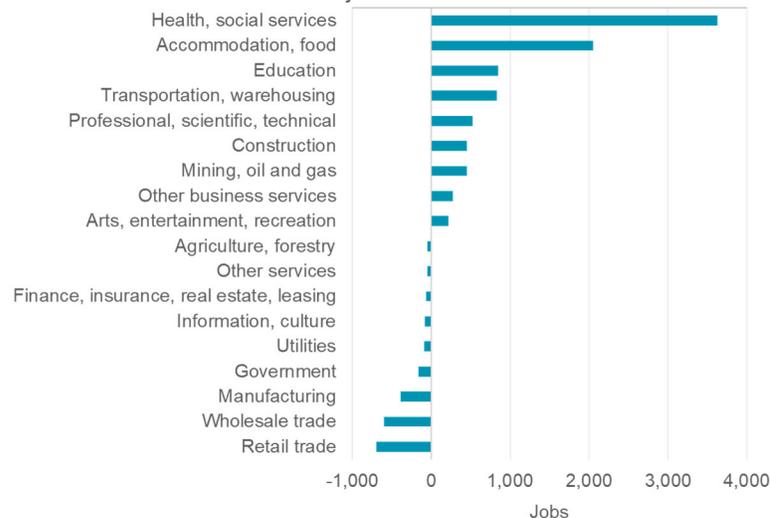
The following exhibits illustrate the population and employment by place of work (EPOW) projections for the three scenarios (please refer to Appendix 2 for detailed population and employment projection exhibits for each scenario).



POPULATION AND EMPLOYMENT PROJECTIONS (2021-2046)					
Category	Change (2021-2046)			Share of EPOW	
	Reference Scenario	Low Scenario	High Scenario	2021	2046
Total Population (persons)	5,190	-2,040	12,570		
All Industries EPOW (jobs)	7,136	3,420	10,943	100.0%	100.0%
Agriculture, forestry	-46	-67	-24	0.5%	0.4%
Mining, oil and gas	452	28	892	8.2%	8.1%
Utilities	-89	-106	-72	0.6%	0.5%
Construction	453	278	633	4.5%	4.7%
Manufacturing	-387	-559	-210	4.3%	3.4%
Wholesale trade	-598	-665	-529	2.9%	1.9%
Retail trade	-693	-1,104	-274	13.2%	11.1%
Transportation, warehousing	837	677	1,001	3.4%	4.2%
Information, culture	-78	-120	-36	1.4%	1.1%
Finance, insurance, real estate, leasing	-65	-219	92	4.6%	4.1%
Professional, scientific, technical	525	326	728	5.1%	5.3%
Other business services	279	151	411	3.4%	3.4%
Education	852	493	1,220	9.3%	9.6%
Health, social services	3,630	3,035	4,236	16.4%	19.7%
Arts, entertainment, recreation	218	153	285	1.6%	1.7%
Accommodation, food	2,054	1,685	2,434	7.7%	9.7%
Other services	-48	-189	96	4.3%	3.8%
Government	-159	-376	60	8.5%	7.5%

Note: "EPOW" = Employed by Place of Work

Reference Scenario Employment by Industry (EPOW)
Growth Projection – 2021-2046



5.0 LAND DEMAND ANALYSIS

5.1 Introduction

The metroeconomics projection presented above can be translated into a forecast of employment land needs by identifying the type of buildings that are required for each category of employment, and using an employment density figure for each building type to convert anticipated job growth into employment land demand. Of note, the following place of work status data has been considered:

- The 2016 Census indicated 65,150 residents in the City of Greater Sudbury’s employed labour force had a “usual place of work”, accounting for an 85% share of total jobs. This is higher than the provincial average of 81%. Of these 65,150 employees with a usual place of work, 97% commuted within the same Census Subdivision (CSD) of residence; in other words, most people within the labour force who live in Greater Sudbury also work in Greater Sudbury.
- In the City of Greater Sudbury in 2016, there were 8,280 jobs identified as “no fixed place of work.” These are jobs in categories such as construction and transportation, accounting for an 11% share of all jobs (which is on par with the provincial average). As these jobs do not directly generate demand for employment land, they do not form part of our analysis. Our methodology only considers employment by place of work (EPOW), which by definition excludes jobs with “no fixed place of work”.
- Approximately 4% of the employed labour force in the city is identified as having a place of work status of “worked at home”. These 3,170 home-based jobs are likely those that would otherwise be accommodated in office spaces, or other mixed use/commercial settings. This figure is somewhat relatively lower than the provincial average of around 7%. Given this small share of overall jobs, we have not factored in home-based employment in our land demand projections (although these jobs are included within the EPOW total).
- In 2016, there were 110 employees whose place of work status was “worked outside Canada”, representing just 0.1% of total jobs in the city. This negligible component of the labour market has not been factored into our land demand modeling.

5.2 Employment Categories

5.2.1 Overview

The following illustrates our approach to allocating employment by industry into real estate requirements, referencing Statistics Canada’s descriptions of the industry sectors in the North American Industry Classification System (NAICS).

5.2.2 Industrial-Type Employment Categories

- **Manufacturing** – Establishments in the Manufacturing sector are often described as plants, factories, or mills, and characteristically use power-driven machines and materials-handling equipment. The materials, substances, or components transformed by manufacturing establishments are raw materials that are products of agriculture, forestry, fishing, mining, or quarrying, as well as products of other manufacturing establishments. **100%** of employment in this category has been identified as requiring industrial-type land and premises.

- Wholesale trade** – The Wholesale Trade sector comprises establishments engaged in wholesaling merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. The merchandise described in this sector includes the outputs of agriculture, mining, manufacturing, and certain information industries, such as publishing. Wholesalers sell merchandise to other businesses and normally operate from a warehouse or office. These warehouses and offices are characterized by having little or no display of merchandise. In addition, neither the design nor the location of the premises is intended to solicit walk-in traffic. Wholesalers do not normally use advertising directed to the general public. Based on the nature of this sector of employment, the Consultant Team has assigned **100%** of these jobs as being associated with industrial land need.
- Transportation, warehousing** – The Transportation and Warehousing sector includes industries providing transportation of passengers and cargo, warehousing and storage for goods, scenic and sightseeing transportation, and support activities related to modes of transportation. Establishments in these industries use transportation equipment or transportation-related facilities as a productive asset. The type of equipment depends on the mode of transportation. The modes of transportation are air, rail, water, road, and pipeline. While jobs in the transportation industry are often associated with having “no fixed place of work”, the warehousing and storage-related jobs are linked with industrial-type buildings, along with the storage and maintenance of transportation equipment. As a sub-set of this category, warehousing and storage is not a significant component of Greater Sudbury’s employment base (it presently accounts for just 3% of all jobs in this sector) – although it is anticipated to expand. The Consultant Team has allocated growth in the freight trucking and warehousing and storage industry groups as generating industrial land demand, and these jobs account for a **45%** share of total transportation and warehousing job growth from 2021-2046.

5.2.3 Office-Type Employment Categories

- Information, culture** – This sector comprises establishments engaged in the following processes: producing and distributing information and cultural products; providing the means to transmit or distribute these products as well as data or communications; and processing data. The main components of this sector are the publishing industries, including software publishing, and both traditional publishing and publishing exclusively on the Internet; the motion picture and sound recording industries; the broadcasting industries, including traditional broadcasting and those broadcasting exclusively over the Internet; the telecommunications industries; Web search portals; data processing industries; and the information services industries. The Consultant Team has assigned **100%** of jobs in this sector as being associated with office-type land need.
- Finance, insurance, real estate, leasing** – The Finance and Insurance sector comprises establishments primarily engaged in financial transactions (transactions involving the creation, liquidation, or change in ownership of financial assets) and/or in facilitating financial transactions. Three principal types of activities are identified: (a) Raising funds by taking deposits and/or issuing securities and, in the process, incurring liabilities; (b) Pooling of risk by underwriting insurance and annuities. Establishments engaged in this activity collect fees, insurance premiums, or annuity considerations; build up reserves; invest those reserves; and make contractual payments. Fees are based on the expected incidence of the insured risk and the expected return on investment; and (c) Providing specialized services facilitating or supporting financial intermediation, insurance, and employee benefit programs. The Real Estate and Rental and Leasing sector comprises establishments primarily engaged in renting, leasing, or otherwise allowing the use of tangible or intangible assets, and establishments providing related services. The Consultant Team has assigned **100%** of jobs in this sector as being associated with office-type land need.

- **Professional, scientific, technical** – Establishments in this sector specialize according to expertise, and provide these services to clients in a variety of industries and, in some cases, to households. Activities performed include the following: legal advice and representation; accounting, bookkeeping, and payroll services; architectural, engineering, and specialized design services; computer services; consulting services; research services; advertising services; photographic services; translation and interpretation services; veterinary services; and other professional, scientific, and technical services. Overwhelmingly, these enterprises are associated with office-type space needs, and accordingly, the Consultant Team has assigned **100%** of jobs in this sector as being associated with office-type land need.
- **Other business services** – Businesses in this sector perform essential activities that are often undertaken in-house by establishments in many sectors of the economy. Activities performed include the following: management of companies and enterprises; office administration; hiring and placing of personnel; document preparation and similar clerical services; solicitation, collection, security, and surveillance services; cleaning; and waste disposal services. While many of these enterprises are associated with office-type premises, job growth in these categories do not directly translate to an increase in occupied office space (as they are ancillary to the office use itself). The Consultant Team has assigned **30%** of jobs in this sector as generating office-type land need.

5.2.4 Institutional Employment Categories

- **Education** – The Educational Services sector comprises establishments that provide instruction and training in a wide variety of subjects. This instruction and training is provided by specialized establishments such as schools, colleges, universities, and training centres. These establishments may be privately owned and operated for profit or not for profit, or they may be publicly owned and operated. In general, jobs in this sector are linked with institutional land needs. The Consultant Team’s approach to generating institutional land demand is discussed in detail below.
- **Health, social services** – The Health Care and Social Assistance sector comprises establishments providing health care and social assistance for individuals (these are grouped together, since it is sometimes difficult to distinguish between the boundaries of these two activities). The majority of jobs in this sector are linked with demand for institutional-type facilities. The Consultant Team’s approach to generating institutional land demand is discussed in detail below.
- **Government** – The Public Administration sector consists of establishments of federal, provincial, and local government agencies that administer, oversee, and manage public programs, and have executive, legislative, or judicial authority over other institutions within a given area. These agencies also set policy, create laws, adjudicate civil and criminal legal cases, and provide for public safety and for national defense. In general, government establishments oversee programs and activities that are not performed by private establishments. The Consultant Team has assigned all jobs in this category to the institutional land category, which is discussed in detail below.

5.2.5 Excluded Categories

- **Agriculture, forestry** – Jobs in this sector are largely associated with sites beyond the City of Greater Sudbury’s Settlement Area boundaries, and accordingly, are not considered in our employment land need assessment.

- **Mining, oil and gas** – In Greater Sudbury, activities in this sector are largely associated with lands designated as Mining/Mineral Reserve, and accordingly, are not considered in our employment land need assessment. Business services related to these industries are addressed separately, based on their use. Of note, metal ore mining was the single largest sector of employment in Greater Sudbury in 2016, accounting for 4,750 jobs (almost 7% of total employment by place of work). It is anticipated to grow to nearly 5,550 jobs by 2046 (although it will be overtaken as the largest segment of employment by the full-service restaurants and limited service eating places category over the forecast horizon, which currently ranks second largest).
- **Utilities** – Jobs in this category are accommodated on lands identified for utilities purposes, and are therefore excluded from our employment land need assessment.
- **Construction** – The Construction sector comprises establishments primarily engaged in the construction of buildings or engineering projects (e.g., highways and utility systems). Establishments primarily engaged in the preparation of sites for new construction and establishments primarily engaged in subdividing land for sale as building sites also are included in this sector. Many of these types of jobs fall into the “no fixed place of work” segment, whereby they are associated primarily with work on project sites, as opposed to an everyday workplace setting.
- **Retail trade** – Jobs in the retail industry are not used as a gauge of employment land demand in our approach to modeling future land needs. Instead, our approach to identifying future retail-commercial land need is addressed in detail below, and is linked to anticipated population growth in the city, compared to the existing retail space inventory.
- **Arts, entertainment, recreation** – The Arts, Entertainment, and Recreation sector includes a wide range of establishments that operate facilities or provide services to meet varied cultural, entertainment, and recreational interests of their patrons. Jobs in this sector are generally not associated with employment land need, and have been excluded from our analysis.
- **Accommodation, food** – The Accommodation and Food Services sector comprises establishments providing customers with lodging and/or preparing meals, snacks, and beverages for immediate consumption. The sector includes both accommodation and food services establishments because the two activities are often combined at the same establishment. Jobs in this sector are associated with demand for retail-commercial land and our approach to identifying this type of land need is addressed in detail below.
- **Other services** – The Other Services (except Public Administration) sector comprises establishments engaged in providing services not specifically accounted for elsewhere in the classification system. Establishments in this sector are primarily engaged in activities such as equipment and machinery repairing; promoting or administering religious activities; grantmaking; advocacy; providing dry cleaning and laundry services; personal care services; death care services; pet care services; photofinishing services; temporary parking services; and dating services. These types of enterprises are generally associated with some form of commercial space needs, and therefore are addressed in our retail-commercial land needs demand modeling described below.

5.3 Employment Density

5.3.1 Industrial Employment Density

Overview

A key input to our land demand modeling is assessing the employment density in the city’s industrial areas. Employment density means the number of employees per hectare, and is influenced by the building’s site coverage (the building footprint divided by the land area, as a percentage).

In higher cost land markets – such as the Greater Toronto Area – it is common for new industrial developments to occupy 35% to 40% of the net land area (when a large block of land is subdivided into development lots, a typical gross to net factor is 80%, to account for the inclusion of local roads and utilities). In markets where land costs are comparatively lower, or there may exist restrictions that encumber development (such as adverse soil conditions), the average industrial building site coverage is often found to be lower, in a range of 20% to 30%. Depending on the nature of the local industrial base, the average site coverage could be even lower – for example, when there is a considerable presence of outside storage of equipment, vehicles, and raw and finished goods. The exhibit below illustrates our observations of industrial building site coverage in Greater Sudbury, based on GIS data received from City staff.

INDUSTRIAL SITE COVERAGE		
Property Sample	Average Site Coverage (%)	Average Building Size (m²)
All industrial buildings	13%	1,925
Industrial buildings on sites <2 ha	16%	970
Industrial buildings on sites <1 ha	17%	780

The overall average industrial building site coverage of just 13% is indicative of some very large sites with a low site coverage, featuring considerable excess land that may be suited to future development. The smaller sites (<2 hectares) are more comparable to our expectations, and align with our on-the-ground observations while touring the various employment areas.

In the 2019 Development Charge Background Study, Hemson Consulting Ltd. utilized a benchmark of 1,000 sf of floorspace per employee for Employment Land. While this is consistent with our experience in many large, urban municipalities, the Consultant Team’s recent work in the City of Thunder Bay included a door-to-door survey of industrial employers⁵ that revealed an average of approximately 725 sf per employee. Although the typical site coverage in Thunder Bay was lower than many other markets we have observed, the relatively more dense floorspace per employee figure offset this somewhat in the overall calculation of employment density. In the following exhibit, we explore the impact of various inputs to the determination of industrial employment density.

INDUSTRIAL EMPLOYMENT DENSITY					
Metric	GTA (Low)	GTA (High)	Thunder Bay	Greater Sudbury (Low)	Greater Sudbury (High)
Square feet per acre	43,560	43,560	43,560	43,560	43,560
Site coverage (%)	35%	40%	18%	20%	20%
Building floorspace (sf) per net acre	15,246	17,424	7,841	8,712	8,712
Floorspace per employee (sf)	1,000	1,000	725	725	1,000
Employees per net acre	15.2	17.4	10.8	12.0	8.7
Acres per hectare	2.47	2.47	2.47	2.47	2.47
Employees per net hectare	37.7	43.0	26.7	29.7	21.5

Note: This exhibit includes imperial and metric measurements. Floorspace per employee is often cited in terms of sf per employee, so acres are a common unit of land area. We have translated this into hectares for the purposes of this Employment Land Strategy, which principally uses metric units.

⁵ A door-to-door survey of industrial employers was intended as part of the Consultant Team’s approach to the City of Greater Sudbury’s Employment Land Strategy, but was not feasible due to COVID-19 public health guidelines/restrictions in place at the time of our work.

Conclusion

For the purposes of our land demand modeling, the Consultant Team will utilize an **industrial employment benchmark density of 25 jobs per net hectare** for Greater Sudbury (within a range of roughly 20-30 jobs per net hectare). This incorporates an assumption of a typical site coverage of 20% for new development.

While there may be some limited examples of employers adapting to physical distancing requirements within industrial workplaces, this is not anticipated to be a long-term trend in the post-COVID

-19 environment. Although increased rates of process automation and rising productivity may result in lower employment density over time, this has already been addressed in our land demand modeling, as we account for declining employment in certain industrial categories by not reducing demand within the existing industrial building stock (only the sectors that are seeing employment gains drive demand for future industrial floorspace).

5.3.2 Office Employment Density

Overview

The pandemic has profoundly impacted commercial real estate in a number of ways. One of the most widely discussed and fiercely debated topics is the future of office real estate, the role it will play, and how occupier strategies will evolve in a post-pandemic world. The lockdown orders associated with the COVID-19 health and economic crisis triggered a dramatic and sudden shift in office work. Office buildings shifted from being 87% occupied globally in February 2020, to virtually empty in April 2020 (leased, but without tenants). The office workforce endured an unexpected, forced transition to a work from home paradigm. The results have shown that flexible, remote work has benefits. Workers themselves report a preference for this kind of flexibility, despite also having a desire to be in the office at least some of the time. Further, executives report that they are planning on implementing more flexible work practices, including greater ability to work from home post-COVID-19. Cushman & Wakefield believes that the workplace ecosystem of the future is a mix of traditional office spaces, home offices, and semi-public spaces. We also believe that it is very unlikely for the pendulum to permanently swing so far in one direction – particularly for firms that rely on innovation, knowledge spillovers, and creativity, to generate value and revenue. Cities are the epicentre of these kinds of phenomena.

Over the past few decades, there had been an accelerating trend of office densification – a decline in the amount of office space per worker. Research conducted by Cushman & Wakefield and CoreNet Global confirmed that the trend in office space since the Global Financial Crisis/Great Recession had been towards greater employee density. In the US, square footage per employee decreased from 19.6 m² in 2009 to 18 m² at the end of 2017 – a decline of 1.6 m². More expensive markets tend to have less space per employee, but the rate of densification is more dependent on the amount of new office supply. Information from Cushman & Wakefield’s Strategic Occupancy Planning group indicates that for recent projects (pre-COVID-19) they had been involved with (generally in Downtown Toronto), the allocation of office space has been below 11.6 m² per person (excluding law firms, which have a higher utilization rate). The rapid expansion of the modern “co-working” model with tight densities in the 6-9.3 m² per employee range (half the space historically allocated in traditional offices) was also influencing density planning. The main reason for the declines in office space per worker was the huge increase in collaborative and team-oriented space inside a growing number of companies that are stressing “smaller but smarter” workplaces. Cost containment is another key element. Open floor plans and “hoteling” (non-assigned workstations) are other key trends that have taken hold over the past decade or more.

Cushman & Wakefield’s survey research indicates that for many workers, the ability to execute focused work is similar to pre-pandemic, while teamwork has increased – all facilitated by technology. However, the bond between colleagues is hampered by exclusively working from home, as is the connection employees feel with their company’s culture. Many workers who are executing well with work from home policies by necessity will be glad to return to the office when it is safe to do so, and they again have the choice. Of most significance to this Employment Land Strategy are the questions “*what is the outlook for future office demand?*”, and “*will there be lasting impacts on office employment density?*”

There is a clear variance in how working from home is experienced by different departments/functions and generations of employees. Many millennials and Gen Z employees are pleased to work remotely; however, their living situations – often in apartments or smaller homes in more dense parts of cities, and with childcare needs to be addressed – can make it more difficult to execute work comfortably. Approximately 70% of Gen Z and millennials report challenges in working from home, compared to 55% of baby boomers. Going forward, businesses will need to create an environment that people will want to spend time in, as opposed to seeing it as a daily chore. This will impact space layouts, amenities, and location (given the pain of employee commutes across large, urban areas).

Cushman & Wakefield published a report titled *Global Office Impact Study & Recovery Timing*, which explores the cyclical and structural changes impacting the global office market, as well as the implications for the timing of a recovery. The pandemic created several forces that directly affect the office sector’s fundamentals. Some of the impacts are cyclical – for example, the COVID-19 recession resulted in office-using job losses, higher vacancy, and will place downward pressure on rental rates. Other impacts are structural, such as a greater share of employees who will regularly work from home. The research concludes that the structural impacts of work from home trends will be offset by factors such as economic growth, population growth, and office-using penetration, which means demand for office will continue to grow over the next 10 years. An increase in permanent work from home and agile workers (those who work away from the office on an occasional basis) is counter-balanced by increased office-type employment growth and a potential reversal of the office space densification trend (at a minimum, we believe that densification will stop).

In order to establish an office employment benchmark density figure for Greater Sudbury, it is necessary to consider two key metrics: office space per employee, and floor space index.

- Office Space per Employee – Guided by Cushman & Wakefield research, precedents in other Canadian markets, and our outlook for workplace trends, office space per employee in a range of 14-18.5 m² (roughly 150-200 sf of net rentable area) per employee is an appropriate benchmark for assessing future land demand in Greater Sudbury. This figure needs to be “grossed up” to account for the total building area (for common areas such as the lobby and corridors), and a factor of 0.85 reflects a typical gross to net space conversion for office construction. We have selected 16.5 m² of net rentable area per employee – grossed up to 19.4 m² per employee – in our modeling. This accounts for the prospect of a lasting impact on office density as a result of the changing office work ecosystem post-COVID-19.
- Floor Space Index – A Floor Space Index (FSI) is defined as a building’s floor area divided by the site area. For the purposes of this Employment Land Strategy, we will consider only suburban-style development (since a dense, Downtown office development needs comparatively limited land, and ensuring a suitable future office land supply city-wide is principally concerned with identifying the quantum of suburban-format development required). A suitable FSI for suburban office development (which includes surface parking) is in the range of 0.3. To the extent that future office space located in the Downtown, this would diminish the amount of overall lands required to accommodate anticipated office-type job growth, since the built form would presumably be at a greater density (hence, our approach should be viewed as conservative).

Conclusion

For the purposes of our land demand modeling, the Consultant Team will utilize an **office employment benchmark density of 155 jobs per net hectare** for new office construction that will be home to the growing number of future office workers through 2046. Implicit in this benchmark are two components:

- A measure of the amount of office space per employee – benchmarked at 19.4 m², for the purposes of our analysis, and guided by the market trends discussed above; and,
- A measure of the land area required to accommodate office development – benchmarked at an average floor space index (FSI) of 0.3, which reflects a suburban-style office built form.

OFFICE EMPLOYMENT DENSITY	
Metric	Value
Site Size (net hectares)	1
Floor Space Index	0.3
Floor Area (m ²)	3,000
Office Space per Employee (m ²)	19.4
Employees per Net Hectare	155

5.4 Industrial Land Need Projection

5.4.1 Reference Scenario

The exhibit below presents the Reference Scenario Industrial Land Need Projection. Some industry groups linked to industrial land demand will see employment growth, while others are anticipated to decline over the forecast horizon. The modeling illustrated below is only concerned with those growth sectors that will contribute to additional need for industrial lands going forward. We have considered all jobs in the manufacturing and wholesale trade sectors, as well as the freight trucking and warehousing and storage industry groups within the transportation and warehousing sector. Overall positive growth of nearly 1,050 industrial-type jobs translates to a need for 42 net hectares of land, at a density of 25 jobs per net hectare.

INDUSTRIAL LAND NEED PROJECTION – REFERENCE SCENARIO					
Industry Sector	Jobs (2021)	Jobs (2046)	Change (2021-2046) ¹	Jobs per Net Hectare	Required Net Hectares
Manufacturing	2,930	2,543	419		
Wholesale trade	2,017	1,419	157		
Transportation, warehousing	2,354	3,191	473		
TOTAL	10,381	10,685	1,049	25	42.0

Note 1: "Change (2021-2046)" captures the industry groups within each sector that are anticipated to see employment growth from 2021-2046. While some industry groups expand and others decline, we are only identifying those growth sectors that will contribute to additional need for industrial lands going forward.

5.4.2 Low and High Scenarios

The scenarios presented below result in a range of land demand from a low approximately 35 net hectares to a high of approximately 50 net hectares.

INDUSTRIAL LAND NEED PROJECTION – LOW SCENARIO					
Industry Sector	Jobs (2021)	Jobs (2046)	Change (2021-2046) ¹	Jobs per Net Hectare	Required Net Hectares
Manufacturing	2,930	2,543	323		
Wholesale trade	2,017	1,419	135		
Transportation, warehousing	2,354	3,191	410		
TOTAL	10,381	10,685	868	25	34.7

Note 1: "Change (2021-2046)" captures the industry groups within each sector that are anticipated to see employment growth from 2021-2046. While some industry groups expand and others decline, we are only identifying those growth sectors that will contribute to additional need for industrial lands going forward.

INDUSTRIAL LAND NEED PROJECTION – HIGH SCENARIO					
Industry Sector	Jobs (2021)	Jobs (2046)	Change (2021-2046) ¹	Jobs per Net Hectare	Required Net Hectares
Manufacturing	2,930	2,543	519		
Wholesale trade	2,017	1,419	179		
Transportation, warehousing	2,354	3,191	538		
TOTAL	10,381	10,685	1,236	25	49.4

Note 1: "Change (2021-2046)" captures the industry groups within each sector that are anticipated to see employment growth from 2021-2046. While some industry groups expand and others decline, we are only identifying those growth sectors that will contribute to additional need for industrial lands going forward.

5.4.3 Summary

The preceding analysis utilized the three projections of employment by industry, and focused on those growth sectors associated with industrial space demand. The Consultant Team has concluded that **there is demand for roughly 35-50 net hectares of industrial land from 2021-2046** (the resulting range of the three projections). For the purposes of land use planning, the **Consultant Team advises ensuring a suitable supply of at least 100 net hectares of industrial land (essentially double the forecast need) to accommodate anticipated demand through 2046.** Ideally, the city's available land supply would be even greater, to ensure a broad range of options among prospective occupiers in terms of location, land pricing, servicing, and planning designation/permitted uses.

5.5 Office Land Need Projection

5.5.1 Reference Scenario

The exhibit below presents the Reference Scenario Office Land Need Projection. Employment in sectors that associated with office-type space demand is anticipated to increase by a net 465 jobs through 2046 (some sectors expand, while others contract). This excludes institutional-type office employment such as health care and government workers who might occupy office premises. To the extent that these functions require offices in private sector buildings, this has not been accounted for (other than jobs situated in retail-commercial environments, such as a medical clinic at a shopping centre). At 155 jobs per net hectare (suburban-style low or mid-rise office buildings), this results in a need for 3 net hectares of land.

OFFICE LAND NEED PROJECTION – REFERENCE SCENARIO						
Industry Sector	Jobs (2021)	Jobs (2046)	Change (2021-2046) ¹	Share of Jobs	Jobs per Net Hectare	Required Net Hectares
Information, culture	932	854	-78	100%		
Finance, insurance, real estate, leasing	3,192	3,127	-65	100%		
Professional, scientific, technical	3,474	3,999	525	100%		
Other business services	2,312	2,591	84	30%		
TOTAL	9,911	10,572	465		155	3.0

Note 1: "Change (2021-2046)" captures the "Share of Jobs" by industry sector that generate demand for office-type premises.

5.5.2 Low and High Scenarios

The Low and High Scenarios presented below result in a range of office land demand for the 2021-2046 period from a low of 0.2 net hectares to a high of 6 net hectares of suburban-style office land.

OFFICE LAND NEED PROJECTION – LOW SCENARIO						
Industry Sector	Jobs (2021)	Jobs (2046)	Change (2021-2046) ¹	Share of Jobs	Jobs per Net Hectare	Required Net Hectares
Information, culture	929	809	-120	100%		
Finance, insurance, real estate, leasing	3,181	2,962	-219	100%		
Professional, scientific, technical	3,462	3,788	326	100%		
Other business services	2,304	2,455	45	30%		
TOTAL	9,876	10,014	33		155	0.2

Note 1: "Change (2021-2046)" captures the "Share of Jobs" by industry sector that generate demand for office-type premises.

OFFICE LAND NEED PROJECTION – HIGH SCENARIO						
Industry Sector	Jobs (2021)	Jobs (2046)	Change (2021-2046) ¹	Share of Jobs	Jobs per Net Hectare	Required Net Hectares
Information, culture	937	901	-36	100%		
Finance, insurance, real estate, leasing	3,207	3,299	92	100%		
Professional, scientific, technical	3,490	4,219	728	100%		
Other business services	2,323	2,734	123	30%		
TOTAL	9,957	11,152	908		155	5.9

Note 1: "Change (2021-2046)" captures the "Share of Jobs" by industry sector that generate demand for office-type premises.

5.5.3 Summary

The preceding analysis utilized the three projections of employment by industry, focused on those sectors associated with office space demand. The Consultant Team has concluded that **there is demand for between roughly 0-6 net hectares of office land from 2021-2046** (the resulting range of the three projections). For the purposes of land use planning, the **Consultant Team advises ensuring a suitable supply of at least 10 net hectares of office land to accommodate anticipated demand through 2046**, in order to provide a range of site selection options, and to account for institutional-type office space demand not captured in our methodology.

Our forecast assumes suburban-style building forms. To the extent that future office employment is accommodated in the Downtown area in new development at higher densities, the quantum of overall land demand would decline accordingly. Depending on the prevalence of work from home arrangements going forward, excess supply in the exiting Downtown office market could absorb a share of future employment growth. Conservatively, our modeling does not account for this, and instead identifies the likely upper end of prospective office land requirements.

5.6 Institutional Land Need Projection

5.6.1 Introduction

The workplace setting of persons employed across the spectrum of industrial-type jobs is fairly uniform: spaces for raw materials storage; manufacturing and/or assembly process areas; storage of finished goods; areas for distribution/logistics; etc. This is common across a range of types of industrial jobs. Similarly, whether an office worker is involved in the finance industry, technology sector, or some other business services, the workplace environment is fairly homogenous, from a space utilization perspective. Accordingly, it is straight-forward to apply a benchmark of workspace per employee (generally translated to number of workers per unit of land area, for the purposes of land demand planning) as an input to a land demand model, as we have done above. In contrast, workers in jobs associated with the institutional sector have more varied workplace environments, which range from schools (education) to hospitals and medical office settings (health care) to residential care facilities (social services) to public administration offices (government).

It is a significant challenge to assign a benchmark employment density to institutional-type jobs. Rather, it is more appropriate to recognize the types of buildings/facilities that will be required to accommodate anticipated future jobs in the institutional sector, and their associated land need city-wide. Some of these facilities are found spread across a community (schools) and are planned for in new expansion areas. Others represent intensification on an existing institutional campus (such as colleges and universities, and hospitals/health care/social services uses). Others may be found in retail-commercial settings (medical clinics, and some government functions – such as Service Canada/Service Ontario offices).

5.6.2 Reference Scenario

The Reference Scenario institutional employment projection identifies growth of some 4,320 jobs across industry sectors linked with demand for institutional space. Within the Education, Health and Social Services, and Government sectors, prominent sub-sectors driving job growth include the following:

- Education – Employment at elementary and secondary schools accounts for close to 90% of total anticipated employment growth in the Education sector through 2046. This is due to a growing population base in the city over that time horizon. New schools will be constructed on lands in residential growth areas, and existing school sites will be intensified as needed.
- Health and Social Services – Jobs in hospitals; offices of physicians, dentists, and other health practitioners; and individual and family services account for approximately 75% of total employment growth in this sector. While some of these jobs can be accommodated in the community in mixed use commercial areas (such as medical office buildings), a significant component will still be institutionally-based.
- Government – Jobs in public administration are forecast to decline in Greater Sudbury by 2046, compared to 2021. However, the picture is mixed; Municipal public administration will see growth, although this will likely be offset by declines in Federal and Provincial employment in the city, corresponding with the anticipated trend in Ontario and Canada.

INSTITUTIONAL JOB GROWTH – REFERENCE SCENARIO			
Industry Sector	Jobs (2021)	Jobs (2046)	Change (2021-2046)
Education	6,390	7,242	852
Health, social services	11,284	14,914	3,630
Government	5,841	5,682	-159
TOTAL	23,516	27,838	4,322

5.6.3 Low and High Scenarios

The outlook for institutional-type employment growth varies from a low of 3,150 jobs added through 2046 (Low Scenario), to a high of approximately 5,520 jobs (High Scenario). These types of jobs comprise a segment of employment that is referred to as “population-related employment”, since their increase/decrease is closely linked with population growth in a community.

INSTITUTIONAL JOB GROWTH – LOW SCENARIO			
Industry Sector	Jobs (2021)	Jobs (2046)	Change (2021-2046)
Education	6,368	6,861	493
Health, social services	11,261	14,296	3,035
Government	5,830	5,454	-376
TOTAL	23,459	26,611	3,152

INSTITUTIONAL JOB GROWTH – HIGH SCENARIO			
Industry Sector	Jobs (2021)	Jobs (2046)	Change (2021-2046)
Education	6,420	7,640	1,220
Health, social services	11,321	15,557	4,236
Government	5,859	5,920	60
TOTAL	23,601	29,117	5,516

5.6.4 Summary

Among Greater Sudbury’s largest employers today are those linked to institutional land demand. While increased jobs in the health care and social services sector is anticipated to be a leading driver of employment growth over the forecast horizon, employment in the post-secondary education sector is more muted. A modest rise in university-related employment is offset by a decline in college-related employment during the 2021-2046 period, while most job growth in the education sector occurs in elementary and secondary schools.

As noted earlier, given the varied types of workplaces required for institutional sector jobs, it is a challenge to assign a benchmark employment density to these jobs. A component of this job growth can be accommodated through intensification on existing properties/campuses, another component will occur in new growth areas as the city’s population increases, and a further component will need lands designated for employment uses. In discussion with major local institutional employers, the following perspective on anticipated growth and potential land requirements were identified:

- **Health Sciences North (HSN)** – In addition to its Ramsey Lake Health Centre – which is basically landlocked – HSN has 12 or 13 other sites across the city, and is seeking to reduce this number. HSN recently completed a 20-year Capital Master Plan. There are a number of factors influencing current/future space requirements (which HSN’s facilities are challenged to address):
 - HSN is an academic teaching hospital, and this requires additional space.
 - There is a movement in the health care field towards an increasing share of private rooms with dedicated washrooms, so this requires more space.
 - In the pre-COVID environment, HSN was in need of additional beds. Going forward, there is a need for superior infection controls, which could affect space allocations.
 - The Walford Road access point is blocked off, which causes issues for on-site traffic movement.

At the Ramsey Lake site, there is a need to “build out and build up”, but structured parking is very expensive to construct. Ideally, this site would be expanded to make it easier for staff to move around among the various facilities on the site, rather than elsewhere in the city.

- **Laurentian University** – The University’s main campus is located at 935 Ramsey Lake Road, and the McEwen School of Architecture (opened in 2016) is located in Downtown Sudbury. The University has a Master Plan in place, and has sufficient owned lands on the campus to accommodate future growth. While post-COVID-19 space requirements are unknown, there is probably suitable facility space for the foreseeable future. The University is open to future partnerships – such as its existing relationships with the Northern Ontario School of Medicine and the Vale Living with Lakes Centre – which could bring future uses to the campus.
- **Cambrian College** – The College is located at 1400 Barry Downe Road, between Lasalle Boulevard and Maley Drive, in the north part of Sudbury. In addition to the on-campus facilities, the College has some leased space off campus in retail-commercial strip malls. While there are two satellite campuses – the Manitoulin Campus in Little Current, and the Espanola Campus – there is no interest in a new off-campus site in Sudbury. A challenge to considering off-campus programming is that the College would prefer to provide similar services to students whether on or off-campus, and this is challenging if sites are dispersed. The College does not have a current Master Plan. However, the Barry Downe Road property has considerable excess (undeveloped) land remaining, should future new development be required over time to accommodate growth.
- **Collège Boréal** – Located at 21 Lasalle Boulevard, north of Downtown Sudbury, Collège Boréal has significant remaining undeveloped land to accommodate growth. The institution is focused on accommodating future growth on the campus to meet facility requirements.

5.7 Retail-Commercial Land Need Projection

5.7.1 Introduction

The analysis of retail market trends, retail inventory, and retail space per capita in a prior section of this report are all key inputs to our land demand projection. Below, we utilize a forecast of future population, along with a site coverage benchmark, to anticipate future retail-commercial land needs.

5.7.2 Population Projection

A key input to the retail-commercial land demand projection is a forecast of population growth. The Consultant Team’s guidance is based upon the Reference Scenario.

POPULATION PROJECTIONS				
Scenario	2016 (Census)	2021 (Forecast)	2046 (Forecast)	Change (2021-2046)
Reference Scenario	166,130	167,800	172,990	5,190
Low Scenario	166,130	167,130	165,090	-2,040
High Scenario	166,130	168,720	181,290	12,570

5.7.3 Site Coverage

A benchmark site coverage of 25% is utilized in our land demand projections. This recognizes the reality of parking ratio requirements for retail-commercial establishments. While parking may be accommodated in parking structures as part of mixed use development/redevelopment, increasing the extent of retail density is a challenge from a site design perspective (with the exception of regional-scale shopping centres, underground or structured parking is relatively uncommon, given the expense associated with its construction and maintenance).

5.7.4 Land Demand Scenarios

In the Baseline Retail-Commercial Land Demand Scenario illustrated below, space demand is projected to continue at the current ratio per capita in Greater Sudbury, (which is 1.95 m², for the purposes of this modeling). Based upon a population increase of 5,190 persons in the Reference Scenario, this translates to a need for land to accommodate 10,125 m² of new shopping centre space. When this space demand is translated to a land requirement at a benchmark site coverage of 25%, this equates to a need for 4.1 net hectares of land by 2046. The alternative population growth scenarios produce a range of land demand from -1.6 (or 0) to nearly 10 net hectares.

RETAIL-COMMERCIAL LAND DEMAND – BASELINE SCENARIO			
Variable	Reference Scenario	Low Scenario	High Scenario
Population Growth	5,190	-2,040	12,570
Retail Space per Capita (m ²)	1.95	1.95	1.95
Retail Demand (m ²)	10,125	-3,980	24,523
Site Coverage (%)	25%	25%	25%
Land Required (net hectares)	4.1	-1.6	9.8

A second set of scenarios has been developed that tests the impact of a reduction in retail space per capita in the future. This assumption is influenced by the secular trends apparent in the consumer market today towards online shopping, mobile commerce, same-day/next day delivery of goods, and declining store sizes among certain retail categories, as discussed previously. The current shopping centre inventory in Greater Sudbury is approximately 312,265 m² (based on CSCA data). In these Reduced Space per Capita scenarios, retail space demand per capita is reduced from the current rate of 1.95 m² to 1.76 m² per person (a 10% reduction) and 1.56 m² per person (a 20% reduction).

A population increase of 5,190 persons in the Reference Scenario – on its own – would translate to a requirement for land to accommodate new retail-commercial space. However, this does not take into account the fact that the reduced amount of retail space per capita demand also impacts the existing retail-commercial environment. This must also be taken into consideration.

- 10% Reduction in Demand per Capita** – If retail space demand declines by 10% as a result of retail and consumer market dynamics (represented by the reduced demand factor of 0.90 in the exhibit below), then there is an excess inventory of approximately 32,450 m² of retail-commercial space in the Reference Scenario. This exceeds the Reference Scenario new retail demand growth figure of approximately 9,100 m², meaning that not only is no new retail supply required by 2046, but that the existing inventory would represent an over-supply of space of around 23,300 m². The alternative population growth scenarios generate a range of retail demand outcomes, from an excess supply of 36,000 m² in the Low Scenario, compared to 10,400 m² in the High Scenario. All cases result in no new land being required for shopping centre development.
- 20% Reduction in Demand per Capita** – If future demand for retail space declines by 20% (represented by the reduced demand factor of 0.80 in the exhibit below), then there is an excess inventory of approximately 64,900 m² of retail-commercial space in the Reference Scenario. This exceeds the Reference Scenario new retail demand growth figure of 8,100 m², meaning that not only is no new retail supply required by 2046, but that the existing inventory would represent an over-supply of space of 56,800 m². The alternative scenarios generate a range of demand outcomes, from an excess supply of 68,100 m² in the Low Scenario, to 45,300 m² in the High Scenario. Again, all cases result in no new land being required for future shopping centre development.

RETAIL-COMMERCIAL LAND DEMAND – REDUCED SPACE PER CAPITA SCENARIO (10% REDUCED DEMAND)				
Variable	Reference Scenario	Low Scenario	High Scenario	
Population Growth	5,190	-2,040	12,570	
Retail Space per Capita (m ²)	1.76	1.76	1.76	
Population Growth-Driven New Retail Demand (m ²)	9,113	-3,582	22,071	
Current Inventory (m ²)	324,500	324,500	324,500	
Reduced Demand Factor	0.90	0.90	0.90	
Future Required Inventory (m ²)	292,050	292,050	292,050	
Excess Retail Space – Future Required Inventory Less Current Inventory (m ²)	32,450	32,450	32,450	
Population-Growth Driven New Retail Demand Less Excess Retail Space (m ²)	-23,337	-36,032	-10,379	
Site Coverage (%)	25%	25%	25%	
Land Required (net hectares)	-9.3	-14.4	-4.2	
Land Required – Adjusted (net hectares)	0	0	0	

RETAIL-COMMERCIAL LAND DEMAND – REDUCED SPACE PER CAPITA SCENARIO (20% REDUCED DEMAND)				
Variable	Reference Scenario	Low Scenario	High Scenario	
Population Growth	5,190	-2,040	12,570	
Retail Space per Capita (m ²)	1.56	1.56	1.56	
Population Growth-Driven New Retail Demand (m ²)	8,100	-3,184	19,619	
Current Inventory (m ²)	324,500	324,500	324,500	
Reduced Demand Factor	0.80	0.80	0.80	
Future Required Inventory (m ²)	259,600	259,600	259,600	
Excess Retail Space – Future Required Inventory Less Current Inventory (m ²)	64,900	64,900	64,900	
Population-Growth Driven New Retail Demand Less Excess Retail Space (m ²)	-56,800	-68,084	-45,281	
Site Coverage (%)	25%	25%	25%	
Land Required (net hectares)	-22.7	-27.2	-18.1	
Land Required – Adjusted (net hectares)	0	0	0	

5.7.5 Summary

The retail-commercial land demand scenarios presented above are guided by the same population forecasts, but different assumptions about the future amount of retail space demanded per capita. The Baseline Retail-Commercial Land Demand Scenario assumes that the current rate of retail space per capita is held constant over time (1.95 m² per capita in Greater Sudbury). This results in a range of land demand from 0-10 net hectares, with the Reference Scenario indicating a need for approximately 4 net hectares to satisfy future demand. In contrast, the Reduced Space per Capita scenarios (10% and 20% reduction in demand) indicate that an assumed decline in demand would result in an actual excess of retail inventory, despite population growth occurring through 2046.

It is the view of the Consultant Team that new retail-commercial uses will continue to emerge, notwithstanding the downward pressure on retail space per capita. It is highly likely that some buildings within the existing inventory will become obsolete (due to their format, orientation, age, or other factors), and repurposed to a mixed use or other form of redevelopment, which would reduce the present space inventory. As well, small-scale projects, and lands for freestanding properties, will be demanded. Accordingly, lands must continue to be planned for and designated to meet requirements for new developments. **The Consultant Team recommends planning for 20 net hectares of retail-commercial land through 2046.** This will provide sufficient flexibility for site selection, and will include lands in new growth areas to accommodate neighbourhood-scale and convenience retail-commercial demand as the city's population expands, while at the same time centrally-situated infill sites will still be sought-after by prospective retail-commercial developers.

5.8 Land Demand Summary

The Reference Scenario population and employment growth projections guide the Consultant Team's recommended employment land demand conclusions and recommendations. The Low and High Scenarios allow us to identify a broader range of land requirements that could occur, should growth lag or surpass the Reference Scenario. Together, the scenarios inform our ultimate planning policy and strategic guidance.

LAND DEMAND CONCLUSIONS				
Employment Land Type	Reference Scenario (Net Hectares)	Low Scenario (Net Hectares)	High Scenario (Net Hectares)	Consultant Team Recommendation (Net Hectares)
Industrial	42.0	34.7	49.4	100
Office	3.0	0.2	5.9	10
Institutional	Land requirements to be monitored over time			
Retail-Commercial – Baseline	4.1	-1.6	9.8	20
Retail-Commercial – 10% Reduced Space per Capita	-9.3	-14.4	-4.2	
Retail-Commercial – 20% Reduced Space per Capita	-22.7	-27.2	-18.1	
<i>Note: Where negative land need is indicated, this means that no additional lands are required based on population/employment growth – although planning for employment lands must also consider the provision of suitable sites to satisfy site selection criteria such as location, accessibility, visibility, land price, lot size and orientation, servicing, and other economic/market factors.</i>				

It is important to note that while this land *demand* analysis is expressed in *net* hectares (the developable land area), the preceding land *supply* analysis is discussed in *gross* hectare terms (total land area). It is not possible within the scope of this project to identify the gross to net factor for individual employment land parcels (which in the case of parcels in the built-up area of the city may be nil), since there is a vast supply of vacant lands that may have development constraints such as natural features (waterways, wetlands, forests, etc.), potential issues related to site grading (un-level sites), site configuration (irregular shapes that may limit developability), and in the case of undeveloped areas, a requirement to provide for roads and stormwater management before the actual developable lands can be created. We have assumed that the majority of new industrial lands will require some adjustment to account for undevelopable lands, while new office and retail-commercial properties will develop across the existing urban areas of the city, and require no adjustment from gross to net land area.

The following summarizes the Consultant Team’s recommended employment land allocation by type, for the 2021-2046 horizon.

- **Industrial land – 100 net hectares/125 gross hectares.**
- **Office land – 10 net hectares.**
- **Retail-Commercial land – 20 net hectares.**
- **Institutional land – ongoing land needs are to be monitored in collaboration with major local institutional employers.**

6.0 PLANNING POLICY REVIEW

6.1 Introduction

The following is an examination of the planning policy framework affecting the principles for the management of employment-generating land uses within the City of Greater Sudbury. Through the lens of focusing on elements that are of particular importance to this Employment Land Strategy, this overview includes a review of the following documents:

1. From the Ground Up 2015-2025: A Community Economic Development Strategic Plan;
2. City of Greater Sudbury Official Plan; and,
3. City of Greater Sudbury Zoning By-law 2010-100Z.

Each of these important documents provides a level of guidance for the future development of a range of employment-generating land uses. From an employment land perspective, the primary difference among the three documents relates to the level of detail provided.

- The Community Economic Development Strategic Plan builds on the collective strengths of the community by fostering alliances and partnerships between economic sectors, industries, and institutions.
- The Official Plan provides a more focused land use planning policy framework.
- The Zoning By-law provides the most detailed regulatory framework within which specific forms of development are mandated.

All of these documents work together to achieve a defined urban structure and a growth management strategy for the city.

6.2 From the Ground Up 2015-2025: A Community Economic Development Strategic Plan

6.2.1 Introduction

From the Ground Up is a crucial foundational document that provides the City's economic development road map from 2015 to 2025. While the document identifies directions, objectives, and actions within a defined timeframe, the direction provided in From the Ground Up is expected to influence planning and investment decisions in the city for quite some time. Some of the important observations in the Strategic Plan include:

- The Sudbury economy is rooted in the mining sector, health care, and education.
- Sudbury is a global leader in the mining supply and services industry.
- It is Northern Ontario's hub for health care, and has three post-secondary institutions, making it the largest research hub in Northern Ontario.
- It is one of the few communities in Northern Ontario that has positive population growth.

6.2.2 Strategic Directions

From the Ground Up identifies strategic directions and an Action Plan. The Strategic Plan is guided by its "Everest" goal of 10,000 net new jobs by 2025. In order to meet and support this "Everest" goal, From the Ground Up provides an Action Plan that contains nine goals, as well as objectives and actions that support the realization of the "Everest" goal.

6.2.3 Action Plan

- **Goal 1: A robust entrepreneurship ecosystem.**
 - Work to strengthen the entrepreneurship network and help grow businesses.
 - Objectives and actions include leveraging private sector resources to stimulate job growth, encouraging entrepreneurship, and strengthening business support structures – including the streamlining of the development approval process.
- **Goal 2: A welcoming and open community.**
 - To support adding 10,000 new jobs, there is a need to support and facilitate immigration to the area.
 - Objectives and actions include improving integration services and creating a more welcoming environment for newcomers.
- **Goal 3: A highly-skilled and creative workforce.**
 - To support a continued move toward a knowledge-based economy, the city needs to continue to attract and retain a highly skilled workforce.
 - Objectives and actions include facilitating workforce attraction and integration, developing the skills of the existing community, and capitalizing on post-secondary assets (students).
- **Goal 4: A quality of place and lifestyle that is second to none.**
 - The City needs to focus on creative placemaking in order to attract people to Sudbury. The Plan indicated that there should be a focus on revitalizing and redeveloping the Downtown.
 - Objectives and actions include revitalizing and redeveloping the Downtown, implementing the Retail Attraction Strategy, diversifying the city’s retail sector, promoting multi-residential mixed use development, implementing infrastructure upgrades that support the efficient movement of residents and visitors, developing public spaces, and leveraging buildings and infrastructure as a catalyst for private sector investment.
- **Goal 5: The global leader in the mining supply and services industry.**
 - The mining industry will continue to be the primary driver of economic growth and prosperity, with manufacturing and technology sectors having developed and continuing to develop around the mining sector.
 - Objectives and actions include promoting industrial land development, strengthening Sudbury’s position as a mining hub, strengthening support structures for the mining supply and services sector, and connecting business with research interests.
- **Goal 6: A nationally recognized centre of artistic excellence, vibrancy, and creativity.**
 - Looking to attract new film industry activity, and positioning Sudbury as a “film friendly” regional hub.
 - Objectives and actions include developing cultural spaces and facilities, and updating policies related to filming.
- **Goal 7: One of Ontario’s top tourism destinations.**
 - The City is looking to continue to promote tourism to the area, leveraging the numerous events that the city holds each year, as well as its two science centres and proximity to nature. In addition, promoting retail diversification and investing in infrastructure to support tourism have been identified as important factors to achieving this goal.
 - Objectives and actions include developing a multi-purpose facility for arts, culture, business, and sport within the Downtown, and marketing and promoting the city as a tourist destination.

- **Goal 8: A leader in health and life sciences.**
 - The core of this sector consists of Northern Ontario Medical School and Health Sciences North, and recent growth in this sector includes the construction and operation of new research centres. This sector will continue to play a crucial role in the local economy, and will require an increased focus on research commercialization moving forward.
 - Objectives and actions include leveraging the City’s public sector assets, including expanding the space available across the city’s health and educational facilities; attracting, developing, and retaining talent in this field; creating and commercializing high-value health research; and maximizing its position as the regional centre for health care services.
- **Goal 9: One of the most integrated education and innovation ecosystems in Ontario.**
 - Continue to support the education sector, which plays a large role in research and development.
 - Objectives and actions include developing programs that fill gaps in the region, and coordinate services to address opportunities within the region.

Overall, it is the intent of From the Ground Up to promote the diversification of the economy of Greater Sudbury, in recognition of its historic role as a leader in the mining, mining supply, and mining services industry. The goal of 10,000 new jobs by 2025 is certainly an aspirational objective – well in excess of the Official Plan objective of 8,600 new jobs between 2011 and 2036. The recession brought on by the COVID-19 crisis undermines the achievement of this goal, with the economic recovery still presently underway.

The diversification of the economy focuses on key sectors that are already well established in the city (mining, education, and health care), as well as a few other sectors that are new, or are emerging within the city (tourism and film/culture). From the Ground Up does not subdivide job growth among the various desired sectors, although it does make a clear link between the attraction of new jobs to the need to accommodate a supportive workforce and the need to enhance the quality of place and the lifestyle that quality will support.

6.2.4 Summary

From the perspective of land use planning, From the Ground Up identifies some statements for focusing attention on the Official Plan and Implementing Zoning By-law including:

- Goal of 10,000 net new jobs by 2025;
- Streamlining of the development approval process;
- Revitalizing and redeveloping the Downtown; and,
- Promoting multi-residential mixed use development; industrial land development; and retail diversification.

6.3 City of Greater Sudbury Official Plan

6.3.1 Introduction

The City of Greater Sudbury Official Plan was first adopted by City Council on June 14, 2006. It was approved by the Ontario Municipal Board, in parts, beginning in 2008 and through to 2010. It has been amended on numerous occasions over time. The version of the Official Plan reviewed here is a Consolidated version that includes all Amendments in effect up to May, 2019.

Importantly, the Official Plan is a key implementing document for From the Ground Up 2015 to 2025. The objectives and actions of the Community Economic Development Strategic Plan have been appropriately recognized in the Official Plan, and have led to corresponding policy frameworks that will result in land use planning decisions that support the City's economic development aspirations.

6.3.2 The Vision for Greater Sudbury

Section 1.4 of the Official Plan articulates a Vision for Greater Sudbury. Of relevance to this review, the Official Plan includes within its broad vision the following statements:

- *“Greater Sudbury is an important centre in Northern Ontario, and focal point for regional investment and growth. Greater Sudbury’s regional role as a centre for business and professional services, higher learning, health and medicine, research and innovation, shopping, and tourism, is solidified through renewal and expansion of existing assets.”*
- *“Greater Sudbury is open to business, providing an economic environment that retains and grows a wide variety of industrial, institutional, and commercial enterprises. The natural resources that form the basis for our economy – in particular, the mineral and mineral aggregate resources – are protected, and will see additional investment and activity. The community’s Economic Development Strategic Plan has been realized, making the city a magnet for new investment and human capital.”*
- *“Downtown Sudbury is the biggest, brightest, and best downtown in Northern Ontario. The Downtown Sudbury Master Plan is complete. Downtown is more active and better connected. It exemplifies the best in heritage conservation, and urban, architectural, and landscape design. A Nodes and Corridors Strategy is fully underway, and Downtown is better connected to revitalized Town Centres and other strategic core areas by new and distinctive corridors – all featuring mixed uses, a strong public realm, and public transit.”*

The Vision for Greater Sudbury, as articulated in the Official Plan, establishes a number of crucial concepts that are important for the key issues related to Greater Sudbury’s role in the Northeastern Ontario region, and its aspirations for ongoing economic development. It also clearly identifies the role of Downtown Sudbury as the primary urban centre – both within Greater Sudbury and the broader regional context.

6.3.3 Underlying Principles

The Official Plan *“is based on and informed by four broad principles that will help guide future growth and change in our city.”* Of key importance to this overview are Sections 1.3.2 Economic Development and 1.3.4 Focus on Opportunities.

In Section 1.3.2 Economic Development, the Official Plan states: *“Economic development is essential to the future of this community, and an important building block of a Healthy Community.”* The Official Plan goes on to state that *“the City recognizes the link between planning, design, and economic development.”* The Official Plan includes a policy framework *“which supports economic development and prosperity in many different ways.”* The Official Plan:

- *“Ensures that there is an adequate supply of land to meet a variety of economic opportunities.”*
- *“Provides a framework to reinforce the urban structure, achieve a more efficient urban form, infrastructure, public service facilities, and transportation system.”*
- *“Protects important economic assets like the Sudbury Basin and Greater Sudbury Airport from incompatible uses.”*
- *“Enhances the viability of Downtown Sudbury.”*
- *“Promotes brownfield regeneration.”*
- *“Provides opportunities for local food production.”*
- *“Promotes opportunities for economic development and sustainable tourism development.”*
- *“Complements and supports the community’s Economic Development Strategic Plan.”*

Section 1.3.4 Focus on Opportunities indicates that *“The Economic Development Strategic Plan identifies several economic engines as the focus of potential growth.”* This Section of the Official Plan identifies that *“The mining and supply services cluster in particular offers tremendous potential for the development of products, services, and expertise that can be exported globally. This sector will be facilitated by research and development centres based at our post-secondary institutions, including the Northern Centre for Advanced Technology (NORCAT), Sudbury Neutrino Observatory, and the numerous research centres affiliated with the Mining Innovation, Rehabilitation, and Applied Research Corporation (MIRARCO).”*

6.3.4 Urban Structure

The Official Plan identifies that *“The existing urban structure is a result of our geography and the historical development of industrial uses. Many settlements were established as company towns linked to specific industrial activities, such as mining and rail transportation. Other settlements originated as agricultural service centres that further expanded in a dispersed nature along major roads. Over time, these communities and settlements have developed their own unique character and function.”*

The Official Plan recognizes that the City of Greater Sudbury *“has evolved into a global centre of mining, and a regional service and administrative centre in Northeast Ontario.”* To a large extent, this defined functional role for the city affects the policy framework that is articulated in the Official Plan.

The Official Plan goes on to describe the urban structure of the City as consisting of *“a large, central urban area surrounded by more than 20 smaller urban and non-urban settlements that are all tied together through an extensive network of hard and soft infrastructure.”* Further, the Official Plan notes that *“Over half of the total population of Greater Sudbury resides in the former City of Sudbury. The former City of Sudbury, as the location of three-quarters of the jobs in the Greater City, is the main employment centre.”*

6.3.5 Anticipated Growth/Economic Development

The Official Plan indicates that the city's *“population is expected to grow modestly over the next 20 years, given our role as a global mining centre and regional service centre. This growth will be driven by labour force turnover and ongoing economic development efforts.”* With a more specific reference to economic development, the city's *“economy is expected to also grow modestly in the future, as it continues to expand and diversify. Although mining and its related supply and service sector remain our core economic activity, Greater Sudbury is a centre of higher learning, health and medicine, research and innovation, retail, services, and tourism. Growth in these and other sectors will be supported through various means, including appropriate infrastructure investments, public realm improvements, and other strategic projects.”* The Official Plan goes on to say that *“The aging of the population and retirement of the baby boomers, coupled with increased retention and net migration of working age individuals, as well as ongoing economic development efforts, are expected to sustain this growth. Between 2011 and 2036, Greater Sudbury is expected to grow by up to 8,600 jobs, 20,000 people, and 13,000 households.”*

These statements in the Official Plan are very explicit in their description of the role of the city in the broader regional context, and its aspirations for ongoing economic development. There is a clear focus on the city continuing its evolution as a centre for major institutional growth (higher learning, health, and medicine), as a research and innovation hub, and with a focus on providing higher-order retail, service commercial uses, and tourism-related functions. All of this future growth will happen in the context of a recognition that the mining sector will continue to play a vital economic role. This anticipated evolution will have an impact on planning decisions, as well as decisions about infrastructure investment.

6.3.6 The Pattern of Growth

The Official Plan states: *“Looking ahead, the key will be to direct this growth to reinforce the existing urban structure, and improve the efficiency of the urban form, as well infrastructure and service provision.”* In keeping with its stated aspirations of economic evolution, the Official Plan directs that *“growth must be harnessed and directed to reinforce the efficiency, sustainability, health, and resiliency of our communities. The community of Sudbury will continue as the central urban area, and focus of the majority of growth and change. Our local communities will also grow and change.”*

With that stated, the Official Plan goes on to state that *“land supplies in our service communities are more than adequate to meet future demand associated with employment and population growth. There is no need to expand our communities beyond what is currently planned.”* This is a very explicit and important statement that clearly indicates that future growth is to be focused within existing communities, and that the need for an enhanced land supply for any particular land use activity is not required. That statement in the Official Plan is further reinforced in Section 2.3.2 The Settlement Area, which states that *“The City of Greater Sudbury’s land supply consists of land at different stages in the land use planning cycle. This supply is designed to accommodate an appropriate range and mix of employment opportunities, housing, and other land use needs in the short, medium, and long term. The city’s existing supply of land is more than adequate to meet these needs.”* This statement is reinforced by the conclusions of the preceding land supply and demand analysis. It is a policy of the City that *“Future growth and development will be focused in the Settlement Area through intensification, redevelopment, and, if necessary, development in designated growth areas.”*

6.3.7 The Role of Employment Areas/Rural Areas

A deeper review of the Official Plan continues into Section 4.0 Employment Areas and Section 5.0 Rural Areas. These Sections of the Official Plan set the stage for how and where key economic development activities are to be accommodated within the city. The relevant statements of intent, associated policies, and programs are expected to support the more general elements of the Official Plan, as they are articulated in the Vision and Underlying Principles. The following is a review of Sections 4.0 and 5.0 of the City of Greater Sudbury Official Plan.

Section 4.0 Employment Areas

This Section begins with some overarching statements about the philosophy of the City with respect to ongoing economic development. The Official Plan states that *“Diversification forms the foundation of the City’s approach to economic development, and it remains essential to our future growth prospects. While mining continues to function as our core economic activity and primary export generator, Greater Sudbury has diversified over the last three decades to evolve as a regional centre of education, health care, government, business, retail, and tourism services. The establishment of several important advanced institutions and research facilities, combined with the city’s growth as a retail and tourism destination, has contributed to a local economy now focused on a full range of services production.”* This statement is crucial in considering the direction for the types of jobs the City is expecting to attract and accommodate in the coming years, and that, in turn, will have an impact on the land supply for various forms of employment-generating land uses that are desirable.

The policy direction of the Official Plan is a very clear indication that while the mining sector remains important, and will always be a core economic activity and primary export generator, the aspiration of the City is to focus on its evolving role as a regional centre of education, health care, government, business, retail, and tourism services – its function as a regional service and administrative centre. To that end, the Official Plan identifies that *“Employment Area designations acknowledge Greater Sudbury’s changing economy and labour force, and are intended to help implement the City’s long-term strategic planning goals.”* The Official Plan then goes on to identify a number of objectives that apply to all of the Employment Area designations.

The Official Plan states that *“It is the objective of the Employment Area policies to:*

- a) *ensure that an adequate supply and variety of serviced employment land exists throughout Greater Sudbury in accordance with the settlement pattern, allowing for the expansion and diversification of the employment base;*
- b) *ensure that a broad range of commercial opportunities are provided for residents, employees, and tourists;*
- c) *promote the intensification and revitalization of commercial, industrial, and institutional areas;*
- d) *ensure adequate institutional facilities – such as educational, health care, and social service facilities and services – are provided at suitable locations to meet the evolving needs of residents of all ages and physical capabilities in the city;*
- e) *promote the development of the Downtown as an employment and business centre for the city;*
- f) *ensure that existing industrial lands are used efficiently, and promote the development and redevelopment of existing, underutilized, or unused sites;*
- g) *promote environmentally sound industrial practices, and mitigate conflicts with sensitive uses;*
- h) *ensure that new developments do not preclude future extraction of known or potential mineral or aggregate deposits;*
- i) *ensure that mining and aggregate operations are located, designed, and developed so as to minimize impacts upon the social and natural environment;*
- j) *embrace new technologies to harness emerging areas of growth; and,*
- k) *encourage the co-location of public service facilities in community hubs, where appropriate, to promote cost-effectiveness and facilitate service integration, access to transit, and active transportation.”*

These objectives support and reinforce the stated Vision and Underlying Principles of the Official Plan, and they set the stage for subsequent and more detailed policy frameworks. The Official Plan discusses the range of economic activities across four categories, and identifies nine land use designations shown on Schedules 1a, 1b and 1c, Land Use Map. The categories and designations are summarized below.

Section 4.2 Commercial

To service Greater Sudbury’s broad market base and high-order service activities, three types of Centres are established in this Plan: Downtown, Regional Centres, and Town Centres. The Official Plan provides specific guidance for the development of the City’s hierarchy of urban Centres. The Official Plan states that *“Centres essentially form nodes of retail, tourism, business, education, and government services. Depending on their location, character, and function, Centres may service a large regional market, or a smaller local neighbourhood. It is the intent of this Plan to provide sufficient lands in appropriate locations to ensure that all consumer and service needs can be addressed by the market.”*

The Official Plan provides the following policy framework for the array of land use designations that articulate the Commercial Category, as discussed below.

Section 4.2.1 Downtown Designation

The Official Plan identifies and characterizes Downtown Sudbury as *“the heart of Greater Sudbury, and a strategic core area in Northern Ontario. It forms the historic core of the amalgamated city, retaining its important function as a local and regional centre of government services, business services, retail, sport and entertainment uses, arts and culture, and community and institutional uses... the Downtown possesses a distinct built form that sets it apart from other urban areas, offering unique opportunities to protect, develop, and sustain its role as the vibrant hub of a dynamic city.”* This policy articulates the primacy of function for the Downtown – both within the City of Greater Sudbury and across the broader Northern Ontario region. This primary function anticipates that the highest order of government, business, retail, sport and entertainment, arts and culture, and community and institutional uses and facilities, will be focused primarily on the Downtown, and that the Downtown will continue to thrive and expand based on its location and identification as the key urban centre in the region.

The Official Plan is very permissive in terms of land use within Downtown Sudbury. It states that *“A wide variety of uses are permitted in the Downtown, consistent with its function as the most diversified commercial Centre in the city. Residential, commercial, institutional, entertainment uses, and community facilities are permitted as set out in the Zoning By-law.”* The only uses specifically prohibited in Downtown Sudbury are drive-through facilities.

Further, the only specified requirement to approve new development in Downtown Sudbury is the need to ensure that sewer and water capacities are adequate. On the other hand, the Official Plan identifies some significant development incentives. To encourage development in Downtown Sudbury, new development will be exempt from density and maximum height limits, and new non-residential development will be exempt from parking requirements.

This identification of primacy for the Downtown is crucial in considering opportunities for the creation of business office and population-serving employment opportunities (institutional, retail and service commercial, entertainment, and cultural uses) region-wide. The land supply required for the accommodation of those various employment-generating land uses within Downtown Sudbury will either be satisfied through development on unoccupied sites, intensification of existing underutilized lands, or perhaps the delineation of new areas adjacent to the Downtown that may be required to accommodate those uses.

Overall, the planning policy regime for Downtown Sudbury is considered to be very permissive, and is intended to facilitate substantial new development across a very broad range of land use categories. This approach to planning is supportive of the Vision and Guiding Principles of the Official Plan, and must be considered highly supportive of the City's aspirations for economic development.

Section 4.2.2 Regional Centres Designation

The Official Plan identifies three Regional Centres, which correspond to large-scale retail commercial agglomerations including existing malls and large format/big box clusters. The Official Plan characterizes these Regional Centres as *“local and regional retail and tourism destinations, and strategic core areas in Northern Ontario.”* Three Regional Centres are designated based on the existing pattern of development as indicated on Schedules 1a and 1b, Land Use Map:

- Kingsway at Barry Downe Road/Second Avenue;
- Lasalle Boulevard at Barry Downe Road; and,
- Regent Street at Paris Street/Long Lake Road.

The intent of the Official Plan with respect to Regional Centres *“is to encourage planning for these areas to function as vibrant, walkable, mixed use districts, that can accommodate higher densities and provide a broader range of amenities accessible to residents and visitors.”* Permitted uses in Regional Centres *“may include retail, service, institutional, recreational, entertainment, office, and community-oriented activities.”* The Official Plan also indicates that medium and high density residential uses may be included within a Regional Centre as a way to utilize existing infrastructure and achieve increased urban intensification.

Further, the Official Plan states that Regional Centres *“may be appropriate locations for certain light industrial uses which are conducted entirely indoors – provided that appropriate landscaping and buffering can be established to shield any adjacent sensitive uses. Outside storage is not permitted unless it is for the purpose of displaying goods for retail sale.”*

Similar to the Downtown Sudbury designation, the Regional Centres designation permits a host of supportive land uses, and considers their evolving function as significant mixed use urban centres within the urban structure. The Official Plan, in identifying permitted uses in the Regional Centres, does not differentiate or restrict employment-generating land uses, including offices. Rather, the Official Plan is considered very flexible because it does not assign any level of importance or rank in the hierarchy of employment-generating land uses in comparison to Downtown Sudbury, or anywhere else within the hierarchy. This is seen as a market-supportive approach, allowing individual employment generators to have a say in determining where their use may wish to locate. However, unlike the Downtown Sudbury designation, the Official Plan does not provide any explicit incentives to stimulate new development within the Regional Centres.

Overall, it is expected that these Regional Centres have a substantial capacity to accommodate a range of economic development initiatives through future development of their employment-generating functions, including opportunities for new or intensified retail, service, institutional, recreational, entertainment, office, and community-oriented activities. It is also interesting to note that the introduction of medium and high density residential uses is contemplated as part of the ongoing evolution of these Regional Centres.

Section 4.2.3 Town Centres Designation

The Official Plan identifies that the city *“is known for its diverse collection of Communities spread across a wide geographic area. Linked to the historical development of the region, each has developed a distinct character, providing a range of alternative lifestyle and housing options for residents. The existing and historic commercial centres of Communities are thus recognized as Town Centres.”* It is the intent of the Official Plan that *“These areas will provide for the development of commercial uses to service Communities and surrounding residential neighbourhoods and rural areas.”*

The policy of the Official Plan indicates that *“Town Centres will be planned to include a diverse mix of land uses, an appropriate range of housing types, high quality public spaces, and the provision of easy access to stores, services, and recreational opportunities.”* To help achieve this policy, the Official Plan notes that the *“City has shown its commitment to these areas through the adoption of the Town Centre Community Improvement Plan.”*

The Official Plan indicates that *“Permitted uses in Town Centres may include retail, offices, institutional, and other related community services and activities”... “Town Centres may also be appropriate locations for light industrial uses. Outside storage for the display and sale of goods is permitted. Proper landscaping and buffering must also be established for light industrial uses.”*

It is understood that the Town Centre Community Improvement Plan includes financial incentives that facilitate the ongoing improvement of buildings and properties within the Town Centre designation. In addition, the Official Plan helps to facilitate new development by providing the opportunity to consider reduced parking standards *“where off-street municipal or privately-owned communal parking facilities already exist, and can accommodate additional automobiles.”*

The Official Plan states that *“Town Centres will continue to serve the needs of local communities.”* This is an important role, providing retail and service commercial opportunities, as well as some office, cultural, and entertainment uses that service local populations throughout what is a vast and dispersed urban system. The overall contribution of these Town Centres is a key consideration from an economic development perspective, as they certainly provide opportunities for population-related employment growth, in concert with population growth. It is important to keep in mind that the Official Plan does recognize the role and function of these Town Centres, as they are expected to continue to grow and to accommodate future economic opportunities – likely more or less proportionate to their population.

In general, the Official Plan supports Town Centres as important but modestly scaled locations that accommodate a range of uses and facilities complementary to the local communities that they serve. These Town Centres are expected to evolve over time, but are not specifically identified as locations for substantial growth or intensification. They are not expected to play any significant role in accommodating projected employment growth in the City of Greater Sudbury.

Section 4.3 Mixed Use Commercial Designation

While not specifically a part of the defined hierarchy of commercial Centres within the city, the Official Plan does recognize that there are areas of the city – typically located along Arterial Roads – that *“have been developed with a mix of land uses.”* *“These areas meet a variety of needs. They also support and, in some instances, connect strategic core areas.”* The Official Plan states that *“It is the intent of this Plan to recognize the development potential of these areas by permitting a balance of mixed uses, including commercial, institutional, residential, and parks and open space, through the rezoning process. General industrial uses may also be permitted, subject to their compatibility with surrounding uses, and their overall visual impact on mixed use corridors.”*

In general, the Official Plan supports Mixed Use Commercial areas as important but modestly-scaled locations that accommodate a range of uses and facilities adjacent to the Arterial Road network. These areas are complementary to the local communities that they serve. Further, these Mixed Use Commercial areas are expected to evolve over time, but are not specifically identified as locations for substantial economic development initiatives.

Section 4.4 Institutional Areas Designation

The Institutional Areas designation has been established in the Official Plan *“to harness the potential of the institutional sector in the form of research and product development. Institutional Areas that form a concentration of advanced Education, Health, and Research activity are identified.”* The Official Plan goes on to say that *“The Institutional Areas designation acknowledges the important role of the city’s institutions and their contribution to community-based initiatives. Institutional uses are permitted throughout the municipality in accordance with the needs of area residents and policies of this Plan.”*

Greater Sudbury *“has various institutional uses such as elementary and secondary schools, libraries, recreation centres, colleges, a university, and other community facilities that are intended for public use. Some of these uses are small scale and serve local needs. Others are large scale and serve both local and regional needs.”* Further, the Official Plan recognizes that *“Certain compatible uses are permitted in order to facilitate economic development initiatives linked to our post-secondary institutions, hospitals, and research facilities.”* As noted, The Official Plan identifies two scales of institutional uses:

- *“Small scale institutional uses play an important role in the day-to-day life of Greater Sudburians. They are an essential part of our neighbourhood and community fabric. They are places where we go to learn, worship, or play. The intent of this Plan is to recognize the important role that these uses play. Therefore, small-scale institutional uses that are compatible with a residential setting, such as elementary schools, libraries, day nurseries, retirement homes, places of worship, and recreation centres, are incorporated within and permitted by the Living Areas designation. They are generally not shown on Schedules 1a, 1b and 1c, Land Use Map.”*
- *“Major public institutions form some of our largest employers, and have a significant impact on the quality of community life. These strategic core areas include Laurentian University, Cambrian College, Collège Boréal, Health Sciences North, Science North, and Dynamic Earth. In recent years, some major public institutions have developed strategic, long-term Master Plans to guide the ongoing evolution of these areas. The intent of this Plan is to encourage comprehensive, long-term planning for these areas to function as compact, vibrant, walkable, mixed use districts that can accommodate higher densities and provide a broader range of amenities accessible to residents and visitors. Major public institutions are designated as Institutional on Schedules 1a, 1b and 1c, Land Use Map.”*

It is important to recall that the Official Plan is very clear in its recognition that *“Although mining and its related supply and service sector remain our core economic activity, Greater Sudbury is a centre of higher learning, health and medicine, research and innovation, retail, services, and tourism. Growth in these and other sectors will be supported through various means including appropriate infrastructure investments, public realm improvements, and other strategic projects.”* As identified earlier in the projections of employment growth by industry, institutional-type employment accounts for a considerable share of overall job growth through the 2046 forecast horizon.

Building on that statement, it is also very clear that the City recognizes and supports the importance of its array of major institutional uses and facilities, and promotes them as key economic drivers – consistent with the Vision and Underlying Principles of this Official Plan. In the Official Plan, the City identifies its major institutional partners by *“identifying Institutional Areas which form a concentration of Education, Health, and Research activity. These areas include the Laurentian University campus (including the Willet Green Miller Centre and the Northern Ontario School of Medicine), the campuses of Cambrian College and Collège Boréal, Health Sciences North, and the Sudbury Neutrino Observatory.”* The City also recognizes that its major institutional partners have developed Master Plan documents that are intended to identify and manage their individual needs over time. As such, the Official Plan does not provide any significant planning policy regulations that either promotes or restricts their ongoing development. These major institutional partners are expected to play a crucial role in accommodating and attracting the economic drivers of the future of the City of Greater Sudbury.

Section 4.5 Industrial

Due to Sudbury's strong industrial base, the Official Plan has recognized that the designation of sufficient lands to accommodate existing and potential industrial uses is essential. It states that *“The adequate provision of industrial lands, including the creation of additional Industrial and Research Parks, is closely aligned with the City’s long-term strategic planning goals related to economic development.”* Earlier statements in the Official Plan have indicated that the City has enough designated land, and its focus is to accommodate all new development on lands already designated for growth.

To accommodate existing and future industrial forms of development, two broad industrial designations have been established: General Industrial and Heavy Industrial.

Section 4.5.1 General Industrial Designation

The Official Plan allows a range of industrial activities, such as manufacturing and processing facilities, within the General Industrial Designation. More specifically, permitted uses may include: *“manufacturing, fabricating, processing, and assembling of industrial and consumer products; repair, packaging, and storage of goods and materials; and related industrial activities. Complementary uses, such as administrative offices, hotels, and restaurants – which do not detract from, and which are compatible with the operation of industrial uses – are also permitted.”*

Section 4.5.2 Heavy Industrial Designation

Within the Official Plan, the Heavy Industrial designation *“permits all industrial uses, including core infrastructure facilities such as water and wastewater treatment plants and landfill sites. Any expansion to these areas will require an amendment to the Zoning By-law.”*... *“Mining and related smelting, refining, and processing operations, are generally not permitted in Heavy Industrial areas, as the Mining/Mineral Reserve designation applies to those uses.”*

Section 4.6 Mining and Aggregate

As noted, the City of Greater Sudbury's economy has historically been inextricably linked to the mining sector of the economy. The Official Plan states that *“It is the intent of this Plan to responsibly manage mineral and aggregate resources by protecting them for long-term use. This will be achieved by protecting existing and potential resources, controlling and regulating current surface operations, minimizing adverse impacts of operations on the environment, requiring proper and progressive rehabilitation of closed mines and mineral aggregate operations, protecting mineral resources from incompatible uses, and by providing for sequential uses.”*

“Reflecting the importance of natural resources to the local economy, separate land use designations are created for the extraction and processing of mineral and aggregate resources. The Plan designates areas to be included as part of the Mining/Mineral Reserve and Aggregate Reserve.” It is, however, important to note that *“Due to the extensive geographical nature of these designations, the Mining/Mineral Reserve and the Aggregate Reserve are not included as Employment Areas for the purposes of calculating the protection of a 20 year supply of employment areas as required by the Provincial Policy Statement. * (2019 MMAH Mod # 11 and # 12)”* For this reason, these two Official Plan designations are not a focus of this Employment Land Strategy.

Section 4.6.1 Mining/Mineral Reserve Designation

The Mining/Mineral Reserve designation covers a substantial part of Greater Sudbury. These lands are *“considered to have significant mineral potential, including areas forming the Sudbury Igneous Complex, as well as current producing mines, past producing mines, ore processing plants, major tailings areas”*... *“and other mineral deposits.”* Key policies associated with the Mining/Mineral Reserve designation include the following:

- *“Lands designated Mining/Mineral Reserve may be used for a variety of uses related to the extraction of minerals. Permitted uses may include mining and mining-related uses, mineral aggregate uses, smelting and refining uses, pits and quarries and related uses, and accessory uses and structures associated with mining.”*... *“For land in the Mining/Mineral Reserve to be used for mining purposes, an amendment to the Zoning By-law must occur where such lands are not pre-zoned.”*
- *“Other uses such as forestry and other resource-related compatible uses, recreation, parks and open space, and wildlife management may be permitted, provided they do not preclude future extraction. Other industrial uses that will not preclude future mining activities may be permitted, subject to zoning permission and site plan control where appropriate.”*

The Official Plan protects identified mineral resources for long-term use by controlling and regulating current surface operations, minimizing adverse impacts of operations on the environment, requiring proper and progressive rehabilitation of closed mines and mineral aggregate operations, protecting mineral resources from incompatible uses, and by providing for sequential uses.

Section 4.6.2 Aggregate Reserve Designation

The Official Plan states that *“Aggregates and other industrial minerals extracted through pit or quarry methods are valuable, non-renewable raw materials that are utilized extensively for construction, industrial, and manufacturing purposes.”* It is the intent of the Official Plan to *“protect all primary and secondary deposits identified in an Aggregate Resource Inventory Paper (ARIP)”... “or aggregate shown on a Northern Ontario Engineering Geology Terrain Study”... “and all sources currently under license and permit under the Aggregate Resources Act.”* The policy framework that applies to the Aggregate Reserve designation includes the following:

- *“The primary use of lands designated as Aggregate Reserve will be pit and quarry operations. Other uses that do not preclude the possibility of future expansion and extraction may also be permitted.”*
- *“Mineral aggregate operations shall be protected from development and activities that would preclude or hinder their expansion or continued use, or which would be incompatible for reasons of public health, public safety, or environmental impact.”*
- *“All new pit and quarry operations are subject to the Aggregate Resources Act.”*

It is recognized that these important resources require the protection of the policies of the Official Plan. These resources are important as non-renewable raw materials that fuel construction, industrial, and manufacturing operations.

Section 5.0 Rural Areas

The Official Plan recognizes that *“Given Greater Sudbury’s vast geographic area, a significant proportion of the municipality is comprised of Rural Areas.”... “Rural Areas require well-defined policies that protect existing uses, while recognizing that the focus of future development will be fully serviced areas within Communities.”* Further, *“The intent of this designation is to accommodate a variety of land uses that are appropriate for a rural location – especially those that provide rural economic benefits that are balanced with protection of the natural environment and the agricultural resource base.”* It is a key objective of the Official Plan to *“promote opportunities to support a diversified rural economy by protecting agricultural and other resource-related uses, and directing non-related development to areas where it will minimize constraints on these uses.”*

Section 5.2 Rural Area Designation

The Official Plan describes lands within the Rural Area designation as containing *“a variety of land uses, such as farms, woodlots and forests, small industry, and clusters of rural residential development.”* More specifically, the Rural Area designation permits *“rural industrial/commercial uses.”* Relevant policies from Section 5.2.5 include the following:

- *“Rural industrial/commercial uses are generally resource-based, and may include agriculture, dry industrial/commercial uses, and forestry”; and,*
- *“Pits and quarries are permitted in appropriately zoned areas.”*

6.4 City of Greater Sudbury Zoning By-law 2010-100Z

6.4.1 Introduction

The City of Greater Sudbury Zoning By-law is a substantial document, providing detailed development regulations for various land use categories. The Zoning By-law conforms with – and provides additional detail to – the policies of the City's Official Plan. This review of the Zoning By-law focuses on the key zones that will accommodate identified economic drivers into the future.

It is important to note that the array of commercial and industrial uses that are permitted within the Rural Area, as identified in the Official Plan, are generally provided with zoning on the basis of the commercial and industrial categories of the Zoning By-law.

6.4.2 Commercial Zones (Part 7)

The Zoning By-law establishes a hierarchy of Commercial Zones that is intended to recognize various scales and functional roles within the urban centres and corridors of the city, as well as within the smaller outlying communities and within the rural parts of Greater Sudbury. There are seven Commercial Zones, as follows:

- Local Commercial – C1;
- General Commercial – C2;
- Limited General Commercial – C3;
- Office Commercial – C4;
- Shopping Centre Commercial – C5;
- Downtown Commercial – C6; and,
- Resort Commercial – C7.

From an economic development perspective, and while all of these zones accommodate and will produce jobs, it is not likely that the C1 and C7 categories will play a role in accommodating significant new job opportunities in line with the City's economic development aspirations. Those zone categories are either neighbourhood supporting, or specifically focused on resort commercial development. Similarly, the C3 Zone is for smaller-scale medical offices, and other supporting land uses, with a maximum building height of 2 storeys. It is zoning categories C2 and C4 through C6 that are expected to accommodate the most significant elements of both mixed use and single use developments, with a focus on retail and service commercial uses and offices.

- C2 permits the broadest array of land uses, including residential uses, and permits large buildings with relatively reasonable lot coverage. Building heights, however, are limited to 15 metres.
- C4 is focused on office development, with a number of supportive uses also permitted. Lot coverage at 50% is acceptable, and building heights are limited to 34 metres – a mid-rise built form. Permitted residential land uses are limited in height to 8 metres.
- C5 is focused on the city's shopping centres. There is a substantial list of permitted retail and service commercial land uses, as well as a number of uses that support the broader retail function. Office uses are limited, and must be contained within the shopping centre. Residential uses are not permitted. Lot coverage at 50% is generous in this context, but building heights are limited to 20 metres, which is typical of shopping centre/mall development.
- C6 is the zone category that is applicable to Downtown Sudbury. The regulatory regime permits significant built forms with no defined lot coverage limit or height limit. The use permissions are quite broad, with a few logical omissions, and a few that are somewhat less logical (commercial tourist facility, parking garage, and taxi stands, for example). This zone reflects the higher density and mixed use urban centre that Downtown Sudbury is, and will continue to evolve into.

The City's hierarchy of commercial uses is logical, and supportive of the urban structure that is desired and promoted in the Official Plan.

6.4.3 Industrial Zones (Part 8)

Similar to the Commercial Zones, the Zoning By-law establishes a hierarchy of Industrial Zones that reflect an array of functional and physical characteristics. In terms of accommodating future job growth in line with the City's economic development objectives, a range of industrial lands will be required, and need to be made available in order to capitalize on opportunities as they arise. The hierarchy of Industrial Zones includes:

- Business Industrial – M1-1;
- Mixed Light Industrial/Service Commercial – M1;
- Light Industrial – M2;
- Heavy Industrial – M3;
- Mining Industrial – M4;
- Extractive Industrial – M5; and,
- Disposal Industrial – M6.

6.4.4 Institutional Zone (Part 10)

The Institutional Zone permits a limited range of residential development that is institutional in nature (group homes and special needs facilities), as well as an array of typically publicly owned/operated facilities. The regulatory elements of this zone are considered to be relatively flexible, and can accommodate significant buildings – up to a height of 50 metres. In reviewing this zone, it would appear that it is intended for those institutional uses found throughout the city, not including the major institutions (Laurentian University, Cambrian College, Collège Boréal, Health Sciences North, Science North, and Dynamic Earth), which are likely developed through site or area-specific zoning regulations.

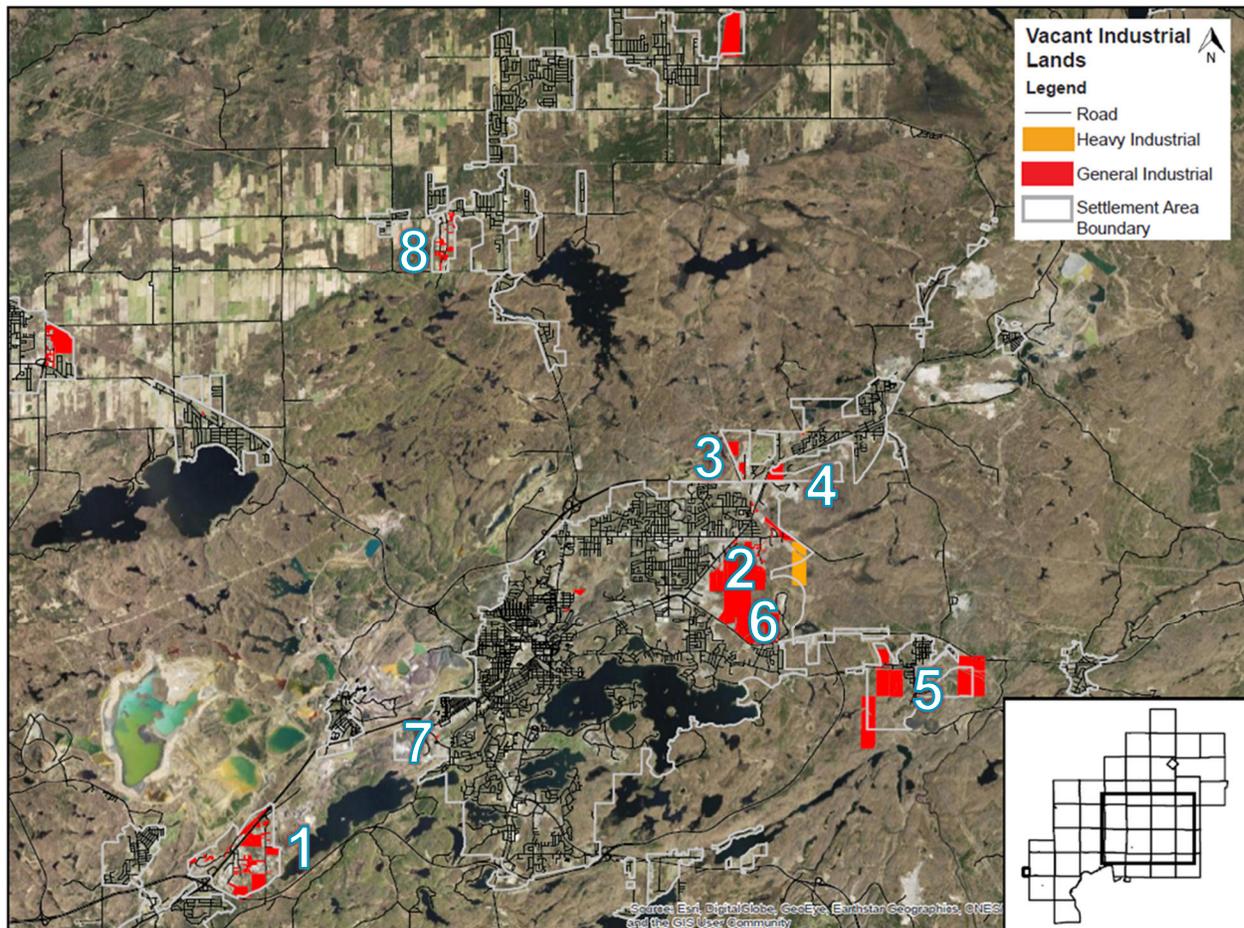
The Institutional Zone applies primarily to existing institutional uses. However, ongoing job growth within the institutional sector is a key part of the economic development strategy of the City. This zone category is an important contributor to that job growth, but it is difficult to predict institutional growth, including their individual requirements, and therefore difficult to pre-zone for those uses.

7.0 INFRASTRUCTURE AND SERVICING REVIEW

7.1 Introduction

Having an understanding of the present infrastructure and servicing capacity and constraints facing the city's employment lands is critical to providing strategic land use guidance on a go-forward basis. The Consultant Team and City staff collaborated to develop a list of eight industrial areas across the city to review from a water, wastewater, and utilities perspective. This list is as follows:

- Fielding Road/Duhamel Road industrial area (#1 on map below);
- Lasalle/Elisabella industrial area (#2);
- National Street industrial area (#3);
- Maley Drive industrial area (#4);
- Coniston industrial area (#5);
- Kingsway industrial area (#6);
- Ceasar Road industrial area (#7); and,
- Valley East industrial area (#8).



SCS Consulting Group led the analysis of infrastructure and servicing, with support from City staff. The purpose of this analysis is to provide high-level recommendations for further review of potential upgrades or construction of new water, wastewater, and utility systems to support future growth within the industrial areas.

7.2 Water Services Review

7.2.1 Background Information

The water and servicing strategies provided in this section are based on the following reports and digital data:

- Industrial Land Infrastructure Assessments, prepared by R.V. Anderson, dated August 12, 2011;
- Fielding Road Industrial Area Water and Wastewater Servicing Municipal Class Environmental Assessment, prepared by R.V. Anderson, dated March 2015;
- City of Greater Sudbury By-Law 2018-45;
- City of Greater Sudbury Water and Wastewater Master Plan, prepared by WSP, 2018;
- Request for Decision regarding the Application for Official Plan Amendment & Rezoning – 1916596 Ontario Ltd., March 14, 2018;
- City of Greater Sudbury 2019 Water Annual Summary Report, prepared by City of Greater Sudbury, dated March 1, 2020;
- City of Greater Sudbury 2020 Water Annual Summary Report, prepared by City of Greater Sudbury, dated March 31, 2021;
- City of Greater Sudbury 2019 Vermilion Annual Water Treatment Plant Report, prepared by the Ministry of Environment;
- City of Greater Sudbury 2020 Vermilion Annual Water Treatment Plant Report, prepared by the Ministry of Environment;
- City of Greater Sudbury Development Charges Background Study, prepared by Hemson Consulting Ltd., dated March 29, 2019;
- City of Greater Sudbury Ontario Job Site Challenge Staff Report, prepared by the City of Greater Sudbury, dated February 21, 2020;
- City of Greater Sudbury 2020 Water and Wastewater Capital Budget, prepared by the City of Greater Sudbury;
- City of Greater Sudbury 2021 Water and Wastewater Capital Budget, prepared by the City of Greater Sudbury; and,
- City of Greater Sudbury Open Data Portal, digital mapping application.

Where applicable, SCS Consulting Group has updated historic infrastructure cost estimates to 2021 pricing using Statistics Canada Quarterly Construction Price Indexing for non-residential construction within the Ottawa-Gatineau Region, in conformity to the indexing applied to DC rates within the City of Greater Sudbury.

7.2.2 Overview of Industrial Areas

Fielding Road/Duhamel Road Industrial Area

Existing Water Servicing

The Fielding Road/Duhamel Road industrial area is located between Regional Road 55 and Highway 17, and is not currently serviced with a municipal water system. There are municipal watermains within Mumford Drive, Magill Street, and the residential areas located west of the Fielding Road/Duhamel Road industrial area. The watermains within Magill Street ultimately connect to an existing 750mm diameter trunk watermain installed in 1924 on the north side of Regional Road 55. The watermain system within this area is serviced by the Vermilion Water Treatment Plant (Vermilion WTP) which is privately owned and operated by VALE (previously INCO Limited). The Vermilion WTP is supplied with surface water from the Vermilion River and is designed for a total production capacity of 81,800 m³/day, with a maximum daily flow of 50,784 m³/day recorded in July 2020, as per the Vermilion Water Treatment Plant Summary Report dated March 31, 2021.

Proposed Water Servicing

The City retained R.V. Anderson in 2014 to prepare an Environmental Assessment (EA) for the Fielding Road Industrial Area in order to determine the appropriate water and sanitary servicing required to allow the area to further develop. The EA determined that the preferred water servicing option was to provide a new 300mm diameter municipal watermain within Fielding Road that would connect to the existing 750mm diameter trunk watermain north of MR 55, as well as 300mm diameter watermains within Nelson Road and Magill Street. The proposed new watermains and looping would provide sufficient system pressures and required fire flow as determined in the Fielding Road EA. To date, the proposed 300mm diameter watermain within West Hill Court located just east of Duhamel Road as well as the 300mm diameter watermain within Duhamel Road have been constructed.

The 2018 Water and Wastewater Master Plan recommended the construction of approximately 4,538m of new 300mm diameter PVC watermain (Project VER-WD-69) to service the future industrial lands in this area and provide a loop through the system by connecting to the existing 750mm diameter concrete trunk watermain on the north side of Regional Road 55. The City has also indicated that a new pressure reducing valve (PRV) (Project VER-WC-77) is to be constructed on the south side of Regional Road 55 in order to reduce pressure for the future industrial development. The estimated gross costs of Project VER-WD-69 as per the 2018 Water and Wastewater Master Plan was \$10,480,000. The City provided an update by R.V. Anderson to these costs which includes a total for new water infrastructure within Fielding Road, Nelson Road, Magill Street, and Duhamel Road, as well as road restoration costs of \$18,800,000 (2021).

There is a cost sharing agreement between the owner at 270 Fielding Road and the City of Greater Sudbury to construct 250m of 300mm diameter watermain within Fielding Road as well as through an easement within 270 Fielding Road and a City-owned service corridor ultimately connecting to the existing watermain within West Hill Court. The expense to the City of Greater Sudbury as per the City's cost sharing agreement is 50% of the anticipated costs, or a total of \$267,375.

City of Greater Sudbury Water Modeling

The City of Greater Sudbury completed a high-level water modeling analysis using estimated gross development areas of undeveloped properties within the industrial area, as well as an assumption of max flow pressure of 40psi and fire flow pressure at 20psi during max daily demand to estimate the future requirements for the water system within the Fielding Road/Duhamel Road industrial area – assuming the remaining industrial lands develop over the next 15+ years. Based on the results of the modeling, if the Fielding Road industrial area were to build out over the next 15+ years, the infrastructure upgrades recommended within the R.V. Anderson EA Report dated March 2015, as well as the 2018 Water and Wastewater Master Plan, will provide sufficient daily maximum demand as well as fire flow. Any proposed updates to the water system in this area are to be coordinated and approved by Vale, as the owners of this private system.

Lasalle/Elisabella Industrial Area

Existing Water Servicing

The Lasalle/Elisabella industrial area is located east of Falconbridge Highway and south of Lasalle Boulevard within Sudbury. The industrial area is partly serviced with a 200mm diameter cast iron municipal watermain installed in 1964 within Elisabella Street, as well as a 300mm diameter watermain within Lapointe Street. There are additional existing watermains surrounding the industrial area including a 250mm diameter PVC watermain located on Chalmers Street and a 150mm diameter watermain located within Hudson Street, southwest of the industrial area. There is an existing 750mm diameter PVC trunk watermain located on Falconbridge Highway.

The City of Greater Sudbury has confirmed that there is insufficient fire flow within the watermain on Elisabella Street, and this watermain will need to be upgraded. The watermain system within this area is serviced by the Wanapitei Water Treatment Plant (Wanapitei WTP). The Wanapitei WTP is supplied with raw water from the Wanapitei River, and has a rated capacity of 54,000 m³/day, with an average maximum daily flow of 27,017 m³/day as per the City of Greater Sudbury 2020 Water Summary Report.

Proposed Water Servicing

To properly service the Lasalle/Elisabella industrial area with municipal water sufficient to address fire flow requirements, the existing 200mm diameter cast iron watermain within Elisabella Street will need to be upgraded and replaced. Upgrades to the existing 200mm PVC and CI watermains from Falconbridge Highway within Lasalle Boulevard and Elisabella Street would also provide additional fire flow and available demand for the future industrial area. Within the 2011 Industrial Land Infrastructure Assessments prepared by R.V. Anderson, an estimate was prepared for watermain replacement and extension of new watermains to service future industrial lands. R.V. Anderson recommended that based on fire flow requirements at the time of their water modeling, a new 400mm diameter watermain connection to the existing 750mm diameter trunk watermain within Falconbridge Highway would provide adequate fire flow and demand for the growing industrial area. The total cost of upgrades of watermains within Elisabella Street, Lasalle Boulevard, San Francisco Street, Carmelo Avenue, and Foundry Street is approximately \$13,300,000 (2021).

City of Greater Sudbury Water Modeling

The City of Greater Sudbury completed a high-level water modeling analysis using estimated gross development areas of undeveloped properties within the industrial area as well as an assumption of max flow pressure of 40psi and fire flow pressure at 20psi during max daily demand to estimate the future requirements for the water system within the Lasalle/Elisabella area if the remaining industrial lands develop over the next 15+ years. This area is also known to the City for water supply issues as well as breakages within the watermains. Based on the results of the modeling, if the Lasalle/Elisabella industrial area were to build out over the next 15+ years, the existing infrastructure would require upgrades as well as an extension south to Chalmers Street to further service future industrial lands.

National Street Industrial Area

Existing Water Servicing

The National Street industrial area is located north of Maley Drive on National Street, within the Township of Garson. The industrial area is serviced by a 250mm diameter municipal watermain as well as a 200mm diameter municipal watermain within National Street. There is an existing 750mm diameter trunk watermain located on Falconbridge Highway and an existing 600mm diameter PVC watermain on Maley Drive, east of National Street. The watermain system within this area is serviced by the Wanapitei Water Treatment Plant (Wanapitei WTP).

Proposed Water Servicing

To fully service the National Street industrial area with municipal water, the existing watermain on National Street will need to be extended north to O'Neil Drive West as development proceeds within this area. The 2018 Water and Wastewater Master Plan recommended the construction of approximately 3,317m of new 300mm diameter PVC watermain (Project SUD-WD-87) within National Street from approximately 600m north of Maley Drive to O'Neil Drive West, east along O'Neil Drive West connecting into an existing watermain just north of Falconbridge Highway. The estimated costs to provide new watermains within National Street up to O'Neil Drive West to service the future industrial lands within National Street is approximately \$546,250 (2021).

Maley Drive Industrial Area

Existing Water Servicing

The Maley Drive industrial area is located east of Falconbridge Highway on Maley Drive within the Township of Garson. The industrial area is partially serviced with a 200mm diameter municipal watermain and a 150mm diameter municipal watermain within Maley Drive east of Falconbridge Highway. There is a 750mm diameter trunk watermain located within Falconbridge Highway west of the industrial areas, 300mm diameter and 400mm diameter watermains within Falconbridge Highway north of the industrial lands, as well as a 250mm diameter watermain and easement south of Falconbridge Highway through the existing Northern RV Sudbury dealership located at 2164 Falconbridge Highway. This watermain and easement through the RV dealership was recently constructed for the purpose of providing a connection on the north side of the future industrial lands to services these lands when required. The watermain system within this area is serviced by the Wanapitei Water Treatment Plant (Wanapitei WTP).

Proposed Water Servicing

The Maley Drive industrial area, which is approximately 340 hectares, was submitted to the Ontario Government by the City of Greater Sudbury under the Job Site Challenge partnership opportunity. The Provincial Government is looking to identify large industrial shovel-ready sites to be used by automakers or other advanced, large-scale manufacturers. In order for the Maley Drive industrial area to be ready for future industrial development and to be considered available for the Job Site Challenge, the site needs to be serviced via municipal water with suitably sized watermains to allow for appropriate water demand and fire flow for the future industrial developments. In order to provide a looped system as well as greater daily demand pressure and fire flow pressure, a new watermain within Maley Drive connecting the existing watermain west of Falconbridge Highway to the new industrial lands is required. Due to the topography at the intersection of Maley Drive and Falconbridge Highway (average elevation of 277m) versus the potential expansion areas to the east of Falconbridge Highway (highest elevation up to 317m), there may be a requirement for an internal water booster station(s) to service the future industrial area.

As per the City of Greater Sudbury staff report dated February 21, 2020 regarding the Ontario Job Site Challenge within the Maley Drive Industrial Area, the City indicates that the costs to extend the watermain east across Falconbridge Highway at Maley Drive to service the site has been included in the 2019 DC Background Study. The City of Greater Sudbury provided the 2018 Engineering Estimate for Contract ENG18-35, which includes costs for the required watermain upsizing between National Street and Falconbridge Highway, as well as the extension of a watermain under the existing Falconbridge Highway to the Maley Drive industrial lands. The updated cost of the watermains within Maley Drive is approximately \$2,480,000 (2021). The City has slated these works to begin and be completed within the year 2028.

Depending on when the City would like to see this industrial area grow, as well as if the industrial area is awarded the Job Site Challenge from the Ontario Government, construction of the upgraded watermain within the year 2028 may be too far off. The City should consider moving up the timing of the construction of the watermain within the next DC Background Study update in 2024 based on the results of the Ontario Government Job Site Challenge or the demand from private landowners to develop within the Maley Drive industrial area.

Coniston Industrial Area

Existing Water Servicing

The Coniston industrial area is located southeast of the Trans-Canada Highway and Kingsway intersection, in the Township of Neelon. The industrial area is serviced by a 300mm diameter municipal watermain within Allan Street, as well as a 150mm diameter municipal watermain just west of Edward Avenue, within a residential laneway. The watermain within the residential laneway is currently undergoing upgrades by the City of Greater Sudbury in order to upsize the watermain from a 150mm diameter to a 300mm diameter to provide greater services to the area. There is a cost sharing agreement in place between the developer and the City for this project, with the City's proportionate share being approximately \$1,260,000 (2021). The industrial lands east of Edward Street are serviced by a private 250mm diameter watermain which services the Sudbury/Coniston Airport lands, as well as the Twin Stacks Golf Club, and an existing industrial building on Smelter Road. The watermain system within this area is serviced by the Wanapitei Water Treatment Plant (Wanapitei WTP).

Proposed Water Servicing

To service the western Coniston industrial area south of Allan Street with municipal water, new watermain will need to be constructed, connecting into a future 750mm diameter trunk watermain within Allan Street. If development is pursued on any of the eastern identified industrial lands, then a similar servicing strategy would be recommended in that new watermain are required to be constructed and a connection made to the existing 750mm diameter trunk watermain within Highway 17. This would be a costly option, as the watermain connection to the 750mm diameter trunk within Highway 17 would need to cross at least one set of railway tracks and possibly portions of Coniston Creek.

Due to the topography of the existing developed area within Coniston (average elevation of 249m) versus the potential expansion areas to the west (elevation of >254m up to 280m south of Allan Street and 288m north of Allan Street) and east (elevation of >254m up to 288m), there may be a requirement for a water booster station(s) to service the future industrial areas.

The 2018 Water and Wastewater Master Plan has recommended the construction of a new 750mm diameter watermain (Project VER-WC-151) on Allan Street from the Wanapitei WTP west through Coniston to Sudbury, in order to improve the service to Sudbury. The total estimated cost was \$33,160,000 (2018). Timing for construction of this new trunk sewer is anticipated as 2031, with the City currently moving ahead with the required EA to determine the preferred location of the new trunk watermain. It should be noted that the estimated cost for the construction of the trunk watermain (Project VER-WC-151) includes the entirety of the project which will serve not only Coniston, but Sudbury as well. Assuming Statistics Canada Indexing remains consistent over the next 10 years at a rate of approximately 3% annually (2018-2021 total average indexing increase each year as per Statistics Canada for Ottawa-Gatineau), the estimated costs could increase to approximately \$50 million dollars (2018-2031).

The upgrade of the existing watermain from a 150mm diameter to a 300mm diameter is intended to improve daily demand as well as fire flow to the existing and future industrial lands. If the watermain is further extended east towards the existing airport lands or the potential industrial lands east of the airport, then a booster station may be required due to variations in elevation. If the Coniston industrial area is to build out in the next 15+ years, there will be a need to provide the future 750mm diameter trunk watermain earlier than 2031.

Kingsway Industrial Area

Existing Water Servicing

The Kingsway industrial area is located east of Falconbridge Road on Kingsway, within the Township of Neelon. The industrial area is partially serviced with a 300mm diameter municipal watermain and a 200mm diameter municipal watermain on Kingsway Avenue, as well as a 750mm diameter trunk watermain located adjacent to Kingsway Avenue. The watermain system within this area is serviced by the Wanapitei Water Treatment Plant (Wanapitei WTP). The Wanapitei WTP is supplied with raw water from Wanapitei River.

Proposed Water Servicing

At the time of this report, the City of Greater Sudbury had received applications for development by 1916596 Ontario Ltd. within the Kingsway industrial area to construct a Casino, Hotel, and Event Centre within Parts 27-33 of the Draft Plan of Subdivision for the Kingsway Industrial area – also known as the Jack Nicholas Business and Innovation Park. Within the application for Official Plan Amendment (OPA) and Re-zoning for 1916596 Ontario Ltd., the City has stated that the proposed development of the Casino, Hotel, and Event Centre are to provide municipal services that not only service their own needs but also are sized to direct and accommodate expected growth or development. These future services are to connect to existing services constructed by the City in 2007 within the Kingsway.

The proposed development would provide watermains that not only are sized to service their lands but also the future employment lands within the Kingsway industrial area, and this will support and encourage growth within the remaining industrial parcels. The City will also be receiving funds from the landowners within this area as part of their development requirement based on By-Law 2018-45 which will fund the existing infrastructure on the Kingsway constructed by the City. This By-Law is amended each year with new user fee rates by the City of Greater Sudbury. As per the application for Official Plan Amendment (OPA) and Re-zoning for 1916596 Ontario Ltd., the City is expected to recover a total amount of \$3.8 million from the developments within the Kingsway industrial area. These amounts are on top of the required development charges to be paid by industrial developments to the City as part of their development event. It would be beneficial for the City to encourage growth and development within this industrial area in order to recover their costs for services constructed in 2007 that have not been used to their full potential to date.

Cesar Road Industrial Area

Existing Water Servicing

The Cesar Road industrial area is located south of Big Nickel Road along Kelly Lake Road and Lorne Street, in the Township of McKim. The industrial area is serviced by 200mm diameter, 250mm diameter, and 300mm diameter municipal watermains within Kelly Lake Road, as well as 200mm diameter municipal watermains within Lorne Street. Lands located on Cesar Road are serviced by a private 200mm diameter watermain within the City's lands adjacent to the Kelly Lake Wastewater Treatment Plant (WWTP). The private watermain connects to the existing 300mm diameter watermain on Kelly Lake Road and is located along the south and east City property line of the Kelly Lake WWTP. The watermain then crosses a small tributary of Kelly Lake in order to provide water to an existing industrial building located at 1 Cesar Road. The City has also left a 300mm diameter watermain stub at the intersection of Kelly Lake Road and Cesar Road to service future industrial lands west of Kelly Lake Road and northwest of Cesar Road. The watermain system within this area is serviced by the David Street Water Treatment Plant (David Street WTP). The David Street WTP is supplied with raw water from Ramsey Lake and has a rated capacity of 40,000 m³/day, with an average maximum daily flow of 19,382 m³/day as per the City of Greater Sudbury 2020 Water Summary Report.

Proposed Water Servicing

Within the 2018 Water and Wastewater Master Plan, it is recommended that the City upgrade the existing 200/250mm diameter municipal watermain within Kelly Lake Road to a 300mm diameter PVC watermain (Project SUD-WC-132) which will provide a consistent sized watermain for the area. As well, the Master Plan proposes an upgrade to the existing 150mm diameter municipal watermain within Lorne Street to a 200mm diameter PVC watermain (Project SUD-WC-133) and recommends the construction of a 400mm diameter PVC watermain from McLeod Street to Kelly Lake Road (Project SUD-WC-123). City staff have confirmed that the necessary watermain upgrades within Kelly Lake Road are now in place to service future development of this industrial area.

Valley East Industrial Area

Existing Water Servicing

The Valley East industrial area is located south of Main Street along Belisle Drive and White Street, within the Township of Val Caron. There is an existing 300mm diameter municipal watermain within Belisle Drive, and an existing 200mm diameter municipal watermain within White Street. The watermains within Belisle Drive and White Street are fed by a 600mm diameter trunk watermain located on Main Street. The Valley East lands are a part of the Blezard Valley Drinking Water System which includes multiple wells as the raw water source for the area, as well as each well site containing one well pump, disinfection abilities using chlorine gas, ultraviolet irradiation, along with fluoride injection. The average well site usage as per the City of Greater Sudbury 2020 Water Summary Report is 33.2%, which includes usage at the Dechene, Kenneth, Philippe, Frost, Notre Dame, Linden, Pharand, Michelle, Chenier, and 'R' wells.

Proposed Water Servicing

In order for the Valley East industrial area to be serviced via municipal water, new watermains will need to be constructed connecting into the existing 300mm diameter municipal watermain within Valleyview Road at Belisle Drive. The 2018 Water and Wastewater Master Plan recommended the construction of a new 300mm diameter PVC watermain (Project VAL-WD-41) on Belisle Drive extending north from Valleyview Road to provide looping within the system to support future industrial development. The estimated gross costs of Project VAL-WD-41 as per the 2018 Water and Wastewater Master Plan is \$520,000. The updated cost for the construction of a new 300mm diameter watermain connection from Valleyview Road (Project VAL-WD-41) is now approximately \$570,000 (2021).

7.2.3 Summary

Introduction

The following infrastructure upgrades can be considered for each industrial area to allow for future lands to develop. Note that the suggested servicing/recommended design could be affected by potential future development proposals that arise in these areas, which may alter the design/scope/cost/timing of such improvements. Please refer to Appendix 3 for additional data.

Fielding Road/Duhamel Road Industrial Area

Based on the results of the City of Greater Sudbury's water modeling as well as the 2015 R.V. Anderson EA for the Fielding Road Industrial Area, if the area were to build out over the next 15+ years, the infrastructure upgrades recommended within the 2015 EA as well as the 2018 Water and Wastewater Master Plan will provide sufficient daily maximum demand as well as fire flow. The estimated gross costs, which includes a total for new water infrastructure and road restoration, is \$18,800,000 (2021).

Lasalle/Elisabella Industrial Area

Based on the results of the City of Greater Sudbury's water modeling, as well as the recommendations within the 2011 R.V. Anderson report, if the Lasalle/Elisabella industrial area were to build out over the next 15+ years, the existing infrastructure would require upgrades within Elisabella Street, as well as the infrastructure within Lasalle Boulevard, east of Falconbridge Highway, and surrounding minor roads, in order to further service future industrial lands and provide looping within the area. The required infrastructure upgrades total \$13,300,000 (2021).

National Street Industrial Area

Based on the recommendations within the 2018 Water and Wastewater Master Plan, new watermains within National Street and O’Neil Drive West are required to further service future industrial lands. The proposed cost of new watermains within National Street to O’Neil Drive West is approximately \$546,250 (2021).

Maley Drive Industrial Area

Based on the requirements of the Job Site Challenge, if the Maley Drive industrial area were to build out over the next 15+ years, there is a requirement for construction of a watermain within Maley Drive that will connect to the existing trunk watermain within Falconbridge Highway and ultimately, through internal development of the industrial area, to the existing watermain located on the south side of Falconbridge Highway at the existing RV dealership located at 2164 Falconbridge Highway. This will allow a looped water system for the industrial area and allow for greater daily demand pressure and fire flow pressure. The estimated costs for upgrading the watermains within Maley Drive and providing a new watermain under Falconbridge Highway is a total of \$2,480,000 (2021), as per the City of Greater Sudbury’s estimated pricing for Contract ENG18-35.

Depending on when the City would like to see this industrial area grow, as well as if the industrial area is awarded the Job Site Challenge from the Ontario Government, construction of the upgraded watermain within the year 2028 may be too far off. The City should consider moving up the timing of the construction of the watermain within the next DC Background Study update in 2024 based on the results of the Ontario Government Job Site Challenge or the demand from private landowners to develop within the area.

Coniston Industrial Area

There is work underway to replace the existing 150mm diameter watermain with a 300mm diameter watermain within a laneway just west of Edward Avenue by a landowner within the Coniston Industrial area. There is also a cost sharing agreement in place between the developer and the City, with the City’s proportionate share being approximately \$1,260,000 (2021).

If the Coniston industrial area is to build out in the next 15+ years, there will be a need to provide a future 750mm diameter trunk watermain. If the industrial lands are to develop over the near term, this trunk watermain will need to be constructed earlier than 2031 (which is the date indicated in the 2018 Water and Wastewater Master Plan). Based on the estimate provided within the 2018 Water and Wastewater Master Plan, the cost for the trunk watermain was \$33,160,000 (2018). Assuming Statistics Canada Indexing remains consistent over the next 10 years at a rate of approximately 3% annually (2018-2021 total average indexing increase each year as per Statistics Canada for Ottawa-Gatineau), the estimated costs could increase to approximately \$50 million dollars (2018-2031). This cost includes the entirety of the project which will serve not only Coniston, but Sudbury as well.

Kingsway Industrial Area

There is currently an application for the development of Parts 27-33 of the Draft Plan prepared by J.L. Richards & Associates Limited for the construction of a Casino, Hotel, and Event Centre within the Kingsway industrial area – the Kingsway Entertainment District. The City provided services for this industrial area within the Kingsway in the form of sanitary and watermain upgrades. These service upgrades have not been used to their full potential since 2007, and the City has been waiting to recover funds from the development of future industrial land uses. It would be beneficial for the City to encourage growth and development within this industrial area in order to recover these costs, and have the services that were provided by the City over 15 years ago be used to their potential.

Cesar Road Industrial Area

City staff have confirmed that the necessary watermain upgrades within Kelly Lake Road are now in place to service future development of this industrial area. The City has left a 300mm diameter watermain stub at the intersection of Kelly Lake Road and Cesar Road to service future industrial lands west of Kelly Lake Road and northwest of Cesar Road.

Valley East Industrial Area

In order for the Valley East industrial area to be serviced via municipal water, new watermains will need to be constructed connecting into the existing 300mm diameter municipal watermain within Valleyview Road at Belisle Drive. The 2018 Water and Wastewater Master Plan recommended the construction of a new 300mm diameter PVC watermain (Project VAL-WD-41) on Belisle Drive extending north from Valleyview Road. The updated cost for the construction of a new 300mm diameter watermain connection from Valleyview Road (Project VAL-WD-41) is approximately \$570,000 (2021).

SUMMARY OF WATER ANALYSIS			
Industrial Area	Remaining Capacity	Estimated New Infrastructure Cost (2021)	Overview of Requirements to Support Future Development
Fielding Road/ Duhamel Road	No system in place currently	\$18,800,000	Not currently serviced with a municipal water system. New watermains needed within Fielding Road, Nelson, and Magill Street. If development is pursued on lands north of Regional Road 55, then a similar servicing strategy would be recommended, with new watermains, and a connection made to the existing Magill Street watermain.
Lasalle/Elisabella	No	\$13,300,000	Upgrades required within Lasalle Boulevard, Elisabella Street, as well as surrounding roads with infrastructure that is currently undersized to provide sufficient fire flow and daily demand for future industrial development.
National Street	No	\$546,250	The existing watermain on National Street will need to be extended north to O’Neil Drive West.
Maley Drive	Yes	\$2,480,000	In order to provide a looped system for the future industrial area, a new watermain within Maley Drive connecting the existing watermain west of Falconbridge Highway to the future development area east of Falconbridge Highway is required. Future internal servicing by the industrial developments will connect to the future watermain on Maley Drive as well as the existing 250mm diameter watermain on the south side of Falconbridge Highway at the RV dealership.
Coniston	No	\$1,260,000 (cost-sharing agreement); \$50,000,000 (Highway 17 trunk watermain – cost inflated to 2031).	To service the western Coniston industrial area south of Allan Street, new watermains will need to be constructed, connecting into a future 750mm diameter trunk watermain within Allan Street. If development is pursued on any of the eastern identified industrial lands, then new watermains are required to be constructed and a connection made to the existing 750mm diameter trunk watermain within Highway 17. Total cost includes the entirety of the project which will serve not only Coniston, but Sudbury as well.

Kingsway	No (to be constructed as part of KED)	\$0	Site of future Kingsway Entertainment District (KED). This development is to provide municipal services that not only service its own needs, but also are sized to direct and accommodate expected growth. The City will also be receiving funds from the landowners within this area as part of their development requirement based on By-Law 2014-3 which will fund the existing infrastructure.
Cesar Road	Yes	\$0	The necessary watermain upgrades within Kelly Lake Road are now in place to service future development.
Valley East	No	\$570,000	New watermains will need to be constructed connecting into the existing 300mm diameter municipal watermain within Valleyview Road at Belisle Drive.

Notes: On-site costs, or subdivision-related servicing costs, are not accounted for. Project costs identified in City documents/data have been inflated to 2021, unless otherwise noted.

7.3 Wastewater Services Review

7.3.1 Background Information

The wastewater and servicing strategies provided in this section are based on the following reports:

- Valley East Industrial Park Proposed Development Preliminary Review, prepared by R.V. Anderson, dated October 13, 2009;
- Industrial Land Infrastructure Assessments, prepared by R.V. Anderson, dated August 12, 2011;
- Fielding Road Industrial Area Water and Wastewater Servicing Municipal Class Environmental Assessment, prepared by R.V. Anderson, dated March 2015;
- Request for Decision regarding the Application for Official Plan Amendment & Rezoning – 1916596 Ontario Ltd., March 14, 2018;
- City of Greater Sudbury Water and Wastewater Master Plan, prepared by WSP, 2018;
- Lively Infrastructure Upgrades, prepared by R.V. Anderson, dated October 1, 2019;
- City of Greater Sudbury Development Charges Background Study, prepared by Hemson Consulting Ltd., dated March 29, 2019;
- City of Greater Sudbury 2019 Wastewater Annual Report, prepared by City of Greater Sudbury, dated July 29, 2020;
- City of Greater Sudbury 2020 Wastewater Annual Report, prepared by City of Greater Sudbury, dated March 8, 2021;
- City of Greater Sudbury 2020 Water and Wastewater Capital Budget, prepared by the City of Greater Sudbury;
- City of Greater Sudbury 2021 Water and Wastewater Capital Budget, prepared by the City of Greater Sudbury;
- City of Greater Sudbury Plan Bypass and Overflow Logs, 2020; and,
- City of Greater Sudbury Open Data Portal, digital mapping application.

SCS Consulting Group also met (virtually) with City staff on the following dates to discuss the overall servicing strategies:

- Employment Land Strategy Workshop, November 12, 2020;
- Review of Existing Servicing with Akli Ben-Anteur from City of Greater Sudbury, November 26, 2020; and,
- Review of Water and Wastewater Modelling Requirements and Potential Outcomes with Tom Gmyrek and Rob Webb from City of Greater Sudbury, February 4, 2021.

Where applicable, SCS Consulting Group has updated historic infrastructure cost estimates to 2021 pricing using Statistics Canada Quarterly Construction Price Indexing for non-residential construction within the Ottawa-Gatineau Region, in conformity to the indexing applied to DC rates within the City of Greater Sudbury.

7.3.2 Overview of Industrial Areas

Fielding Road/Duhamel Road Industrial Area

Existing Wastewater Servicing

The Fielding Road/Duhamel Road industrial area is located between Regional Road 55 and Highway 17, within the Community of Lively. The industrial area within Fielding Road is not currently serviced by municipal sanitary sewers but through privately owned and maintained septic systems. There are existing sanitary sewers west of the Fielding Road industrial area within Mumford Drive and Magill Street from which the wastewater is pumped west via the Vagnini and Magill Lift Stations into an existing sanitary system within the Lively residential area. The wastewater then flows by gravity west to the Jacob Creek Lift Station which pumps the flows west to the Walden Wastewater Treatment Plant (Walden WWTP). Wastewater is treated at the Walden WWTP prior to release to Simon Creek and its tributary system.

A Class EA study for the Lively/Walden Wastewater System was initiated in 2013 by the City of Greater Sudbury. The Class EA recommended detailed design of upgrades to the wastewater collection system to be undertaken, including the Jacob Lift Station and gravity trunk sanitary sewers, decommissioning the Lively WWTP and Anderson Lift Station, and upgrades and an expansion to the extended aeration process at the Walden WWTP. Phase 1 upgrades to the Jacob Street sanitary sewer were completed in 2018. Upgrades to the Walden WWTP are anticipated to begin in 2024 and be completed by 2028, as per the City's 2019 Development Charges (DC) Background Study (City staff advises this work could commence in the near future, pending budget availability).

As per the City of Greater Sudbury's 2020 Wastewater Annual Report, the Walden WWTP has a rated design capacity of 4,500 m³/day, with an average daily flow of 2,621 m³/day, or a daily usage of 58.2% of the rated capacity. There were a total of five Plant By-Pass and Overflow incidents at the Walden WWTP within 2020, mainly due to heavy rain and spring runoff in April 2020, as well as heavy rains that exceeded design capacity between August and October of 2020.

Proposed Wastewater Servicing

The City retained R.V. Anderson in 2014 to prepare an EA for the Fielding Road Industrial Area in order to determine the appropriate water and sanitary servicing required to allow the area to further develop. The EA determined that the preferred sanitary servicing option was to provide gravity sewers on Fielding Road and Nelson to a new lift station on Fielding Road, as well as a new forcemain across Highway 17 to the Mikkola subdivision sewer system in Lively. The City provided updated costs by R. V. Anderson for the proposed sanitary infrastructure which includes gravity sewers within Fielding Road, Nelson Road, Mumford Drive, and Duhamel Road, as well as a lift station and forcemain on Fielding Road and road restoration works, in the amount of \$15,100,000 (2021).

City of Greater Sudbury Sanitary Sewer Residual Modeling

The City of Greater Sudbury completed a theoretical sanitary model for the existing sanitary sewers within Magill Street north of Highway 55, as well as existing sanitary sewers within Duhamel Road south of Highway 55, which not only indicates existing residual capacity on a leg-by-leg basis, but also anticipates what the required upgrades would be if the industrial lands north and south of Regional Road 55 were to build out over the next 15+ years.

Based on the City's theoretical modeling for the potential industrial area north of Highway 55, there is considerable capacity within the existing sanitary sewers with a potential constraint within sanitary sewers identified as WAT-03-0041 and WAT-03-0043 where the residual capacities are reduced to 27.43 l/s and 23.44 l/s, respectively. In order to reduce this constraint and increase sanitary capacity within these sewers, the City could increase the slopes within the sewers identified as WAT-03-0043 and WAT-03-0041 and decrease the slope within the immediate downstream sanitary sewer identified as WAT-03-0044. Currently, the slopes of WAT-03-0043 and WAT-03-0041 are 0.42% and 0.44%, respectively, with the slope of WAT-03-0044 at 2.28%. By decreasing the slope of WAT-03-0044, this would allow an increase of slope within the two upstream sanitary sewers and allow for greater sanitary capacity for future industrial land use. The average current residual capacity within the sewers on Magill Street east and northeast of the Magill Street Lift Station is greater than 53.0 l/s.

Based on the City's theoretical modeling for the potential industrial area south of Highway 55, there is capacity within the existing sanitary sewers on Mumford Drive and Duhamel Road with a potential constraint within sanitary sewers identified as WAT-03-0029 and WAT-03-0028 where the residual capacities are reduced to 23.83 l/s and 22.81 l/s, respectively. In order to reduce this constraint and increase sanitary capacity within these sewers, the City could upgrade the sewers from their current 200mm diameter sizes to 250mm diameter sewers. The sanitary sewers immediately downstream of WAT-03-0029 and WAT-03-0028 are also 250mm diameter sanitary sewers, and therefore upgrading the 200mm diameter sewers to 250mm diameter sewers would not cause additional downstream constraints due to the consistency in pipe sizes. There is also flexibility within the sloping of the sewers, as the sewers upstream of WAT-03-0029 have an average slope of 2.32%. The average current residual capacity within the sewers on Mumford Drive and Duhamel Road is approximately 50.0 l/s.

Lasalle/Elisabella Industrial Area

Existing Wastewater Servicing

The Lasalle/Elisabella industrial area is located east of Falconbridge Highway and south of Lasalle Boulevard within Sudbury. The area is serviced with a 300mm diameter municipal sanitary sewer within Elisabella Street/Lapointe Street, as well as a 450mm diameter municipal sanitary sewer within Lasalle Boulevard at Elisabella Street, and a 600mm diameter municipal trunk sanitary sewer within an easement north of Elisabella Street. Wastewater is treated at the Sudbury WWTP prior to release to Junction Creek and its tributary system.

As per the City of Greater Sudbury 2020 Wastewater Annual Report, the Sudbury WWTP has a design capacity of 79,625 m³/day, with an average daily flow of 58,778 m³/day, or a daily usage of 73.8% of the rated capacity. There were a total of eight Plant By-Pass and Overflow incidents at the Sudbury WWTP within 2020, mainly due to heavy rain and spring runoff between March and June of 2020.

R.V. Anderson completed flow monitoring within the existing sanitary sewer at the corner of Lasalle and Elisabetha in 2010 and found that of the available design capacity of 112 l/s, 47 l/s was being used, or just 41.9% of capacity. R.V. Anderson also concluded that of the 47 l/s used, 26 l/s was peak industrial, and 21 l/s was extraneous flows.

Proposed Wastewater Servicing

To service the Lasalle/Elisabella industrial area with municipal sanitary sewers, an extension from the existing sanitary sewer within Elisabetha Street/Lapointe Street is required, as well as upgrades to the existing 300mm diameter sanitary sewer and/or an inflow and infiltration program to reduce extraneous flows and increase the capacity within the sewers.

City of Greater Sudbury Sanitary Sewer Residual Modeling

The City of Greater Sudbury completed a theoretical sanitary model for the existing sanitary sewers within Elisabetha Street and Lapointe Street and concluded that there is no existing residual capacity and therefore, the City did not run further future scenarios. Within the 2011 servicing report prepared by R.V. Anderson, replacement of the sanitary sewer within Elisabetha Street as well as the extension and replacement of portions of the sanitary sewer with Lasalle Boulevard east of Elisabetha Street is recommended to provide additional downstream capacity. The 2011 R.V. Anderson estimated cost, including road reconstruction, was \$5,090,000. The updated cost for the construction of new sewers is approximately \$6,300,000 (2021). Based on the preceding analysis, if the City is to pursue the Lasalle/Elisabella area for future industrial growth, the existing sanitary sewers are required to be upgraded and/or an inflow and infiltration program is required to reduce extraneous flows in order to allow for additional future capacity.

National Street Industrial Area

Existing Wastewater Servicing

The National Street industrial area is located north of Maley Drive on National Street, within the Township of Garson. The existing industrial area is serviced with municipal sanitary sewers ranging from 150mm to 250mm in size within National Street. R.V. Anderson completed flow monitoring within the existing sanitary sewers in 2010 and found that of the available design capacity of the 41.3 l/s, 8.8 l/s was being used (21.3% of capacity). Of the 8.8 l/s of monitored flow, a total of 2.4 l/s was peak industrial flow, and a total of 6.4 l/s was extraneous flow. The wastewater within this area is serviced by the Sudbury Wastewater Treatment Plant (Sudbury WWTP).

Proposed Wastewater Servicing

In order for the National Street industrial area to be serviced via municipal sanitary sewers, upgrades of the existing sewers to a 300mm diameter, and an extension of the existing sanitary sewers within National Street to O'Neil Drive West, is required. There is also a requirement for sanitary sewer upgrades within the downstream sewers within Maley Drive, as there is no residual capacity within the sewers directly downstream of National Street to support growth within the industrial area.

City of Greater Sudbury Sanitary Sewer Residual Modeling

The City of Greater Sudbury completed a theoretical sanitary model for the existing sanitary sewers within National Street which indicates existing residual capacity on a leg-by-leg basis and also anticipates what the required upgrades would be if the industrial lands were to build out over the next 15+ years. Based on the City's current residual capacity and future theoretical modeling for the National Street industrial area, there is no residual capacity within the existing sanitary sewers. In order to allow for future growth north of the existing National Street employment lands, existing sanitary sewers ranging from 150mm diameter to 250mm diameter (that currently have no capacity to accept future flows) are required to be removed and replaced with 300mm diameter sanitary sewers. There is also a need to remove and replace the existing sanitary sewers within Maley Drive from National Street to Old Falconbridge Highway to provide additional downstream capacity for the National Street industrial area. The estimated costs for the removal and replacement of the National Street sewers as well as the construction of new sanitary sewers north to O'Neil Drive West total \$4,076,700 (2021), including road restoration within the limits of the existing sewer locations and new road construction north of the existing right-of-way within National Street.

Maley Drive Industrial Area

Existing Wastewater Servicing

The Maley Drive industrial area is located east of Maley Drive and Falconbridge Highway within the Township of Garson. The industrial area is serviced by a 200mm diameter municipal sanitary sewer within Maley Drive, west of Falconbridge Highway. R.V. Anderson completed flow monitoring within the existing 200mm diameter sanitary sewer in 2010 and found that of the available design capacity of 33.36 l/s, 35.34 l/s was being used (106% of capacity). Of the 35.34 l/s of monitored flow, a total of 15.9 l/s was peak industrial flow, and a total of 19.47 l/s was extraneous flow. The wastewater within this area is serviced by the Sudbury Wastewater Treatment Plant (Sudbury WWTP).

Proposed Wastewater Servicing

As noted earlier, the Maley Drive industrial area (approximately 340 hectares) was submitted to the Ontario Government by the City of Greater Sudbury under the Job Site Challenge partnership opportunity. In order for the Maley Drive industrial area to be ready for future industrial development and to be considered available for the Job Site Challenge, the site needs to be serviced via new sanitary sewer within Maley Drive east of Falconbridge Highway as well as upgraded sanitary sewers west of Falconbridge Highway. This would allow for greater capacity for the future large industrial area.

The City of Greater Sudbury provided the 2018 Engineering Estimate for Contract ENG18-35 which includes costs for the required sanitary sewer upsizing between National Street and Falconbridge Highway. The costs include upgrades that would allow additional downstream capacity for the National Street industrial area as well as a sanitary connection under the existing Falconbridge Highway to the Maley Drive industrial area. The updated cost of the sanitary sewers within Maley Drive is approximately \$2,365,000 (2021).

City of Greater Sudbury Sanitary Sewer Residual Modeling

The City of Greater Sudbury completed a theoretical sanitary model for the existing sanitary sewers within Maley Drive west of Falconbridge Highway and concluded that there is no existing residual capacity and therefore, the City did not run further future scenarios. In order for the Maley Drive industrial area to be ready for future industrial development and to be considered available for the Job Site Challenge, the site needs downstream sewers capable of handling future industrial flows.

Coniston Industrial Area

Existing Wastewater Servicing

The Coniston industrial area is located southeast of the Trans-Canada Highway and Kingsway intersection, in the Township of Neelon. The existing residential and industrial area is serviced with a 200mm diameter municipal sanitary sewer within Allan Street, as well as a 200mm diameter sanitary sewer just south of Government Road. Wastewater flows either to the Edward Street Lift Station or the Government Road Lift Station. From the lift stations, flows are pumped to the Coniston Wastewater Treatment Plant (WWTP) for treatment.

As per the City of Greater Sudbury's 2020 Wastewater Annual Report, the Coniston WWTP has a rated design capacity of 3,000 m³/day, with an average daily flow of 1,692 m³/day, or a daily usage of 56.4% of the rated capacity. There were a total of 20 Plant By-Pass and Overflow incidents at the Coniston WWTP in 2020, which is well over the average number of incidents for wastewater treatment plants within Sudbury. The Plant By-Pass and Overflow incidents at the Coniston WWTP were mainly due to heavy rain as well as three maintenance events throughout the year. Of the corrective actions and maintenance completed in 2020, the City repaired leaks within the chlorine and potable water systems, dredged the oxidation ditch, and installed an effluent dechlorination system.

Proposed Wastewater Servicing

In order for the Coniston industrial area to be serviced via municipal sanitary sewers, an upgrade to the existing 200mm diameter sanitary sewer within Allan Street as well as the 200mm diameter sanitary within Government Road is required. Within the 2018 Water and Wastewater Master Plan there were no upgrades recommended for the sanitary sewer within Allan Street. The Master Plan did however recommend an upgrade to 175m of the existing 200mm diameter sanitary sewer located south of Government Road (Project CON-WWC-08).

Within the 2019 DC Background Study as well as the 2019-2021 Capital Budgets, the City has not included any specific sanitary sewer upgrades for this industrial area. However the 2019 Capital Budget did identify a required asset management plan for the Coniston WWTP to assess its current condition and implement the recommendations as part of the next phase of upgrades to the plant.

City of Greater Sudbury Sanitary Sewer Residual Modeling

The City of Greater Sudbury completed a theoretical sanitary model for the existing sanitary sewers within Allan Street as well as within the existing sewers just south of Government Road. This work indicates existing residual capacity on a leg-by-leg basis and also anticipates what the required upgrades would be if the industrial lands were to build out over the next 15+ years.

Based on the City's current residual capacity and future theoretical modeling for the existing sanitary sewers within Allan Street, there is some residual capacity within the existing sanitary sewers. There is a constraint in the system within an upstream run identified as NEE-07-0056 where the residual capacity reduces to 1.54 l/s. This constraint is due to the slope of the sanitary sewer being only 0.09%. In order to reduce this constraint and increase sanitary capacity within these sewers, the City could increase the pipe slope within the sewer run of NEE-07-0056 and decrease the slope within the immediate downstream sanitary sewer identified as NEE-07-0049 which has an existing residual capacity of 759.88 l/s and a slope of 29.06%. If future industrial lands are to be serviced Edward Avenue, south of Allan Street, the existing constraint within sanitary sewer NEE-07-0056 will require attention prior to allowing additional flows downstream.

Based on the City's current residual capacity and future theoretical modeling for the existing sanitary sewers located just south of Government Road, there is only minor residual capacity available with zero theoretical capacity beyond 2036. The 2018 Master Plan recommended an upgrade to 175m of the existing 200mm diameter sanitary sewer located south of Government Road (Project CON-WWC-08) which has minor existing residual capacity as shown above. The existing sanitary sewers would be required to be upgraded to allow for future additional capacity for industrial development south or east of Government Road. The 2018 estimated costs of the 200mm diameter sanitary sewer south of Government Road was a total of \$380,000. The updated cost of the sanitary sewers south of Government Road (Project CON-WWC-068) is approximately \$420,000 (2021).

Kingsway Industrial Area

Existing Wastewater Servicing

The Kingsway Industrial Area is located east of Falconbridge Road on Kingsway, within the Township of Neelon. The industrial area is partially serviced with a 300mm diameter and a 450mm diameter municipal sanitary sewers on Kingsway. There is a drainage divide within Kingsway located approximately midway between Falconbridge Road to the west and Moonlight Avenue to the east. The flows collected within the 300mm diameter sanitary sewer within Kingsway travel by gravity east towards Levesque Street, where they flow south to the Levesque Lift Station and are then pumped northwest into an existing trunk sanitary system. The flows collected within the 450mm diameter sanitary sewer within Kingsway travel by gravity west towards the Sherwood Lift Station. From this lift station, flows are pumped north towards an existing trunk sanitary system. The wastewater within this area is serviced by the Sudbury Wastewater Treatment Plant (Sudbury WWTP).

Proposed Wastewater Servicing

At the time of this report, the City of Greater Sudbury had received applications for development by 1916596 Ontario Ltd. within the Kingsway industrial area to construct a Casino, Hotel, and Event Centre within Parts 27-33 of the Draft Plan of Subdivision for the Kingsway industrial area (also known as the Jack Nicholas Business and Innovation Park). Within the application for Official Plan Amendment (OPA) and Re-zoning for 1916596 Ontario Ltd., the City has stated that the proposed development of the Casino, Hotel, and Event Centre is to provide municipal services that not only service its own needs, but also are sized to direct and accommodate expected growth or development. These future services are to connect to existing services constructed by the City in 2007 within the Kingsway. If the proposed development provides sanitary sewers that not only are sized to service their lands but also the future lands within the Kingsway industrial area, this will support and encourage growth across the remaining industrial parcels.

The City will also be receiving funds from the landowners within this area as part of their development requirement based on By-Law 2014-3, which will fund the existing infrastructure on the Kingsway constructed by the City. As per the application for Official Plan Amendment (OPA) and Re-zoning for 1916596 Ontario Ltd., the City is expected to recover a total amount of \$3.8 million from the developments within the Kingsway industrial area. These amounts are on top of the required development charges to be paid by industrial developments to the City as part of their development event.

City of Greater Sudbury Sanitary Sewer Residual Modeling

The City of Greater Sudbury completed a theoretical sanitary model for the existing sanitary sewers within Kingsway which indicates the existing residual capacity on a leg-by-leg basis, and also anticipates what the required upgrades would be if the industrial lands were to build out over the next 15+ years. Based on the City's modeling for the existing sanitary sewers within Kingsway west to the Sherwood LS, there is residual capacity to allow for future industrial growth. The main restriction within this system is within the last two sewer legs prior to entering the Sherwood LS. The sanitary sewers within Kingsway are 300mm diameter to 450mm diameter sewers, with an average existing residual capacity of 296.97 l/s. The last two legs of sewer prior to the lift station are reduced to a 300mm diameter sewer and a 200mm diameter sewer with an average existing residual capacity of 110.30 l/s. Depending on the future industrial flows and on-site uses allowed by the City, the residual capacity could reduce further and cause constraints prior to the lift station. Recently completed upgrades to the Sherwood Lift Station will allow for future development to utilize capacity within the existing sanitary sewer system upstream of the lift station.

Based on the City's current residual capacity and future theoretical modeling for the existing sanitary sewers within Kingsway east and south to the Levesque Lift Station, there is residual capacity to allow for future industrial growth. There are no restrictions within the main sewer within Kingsway east and south to the Levesque Lift Station, with the average existing residual capacity being 171.24 l/s. It would be beneficial for the City to encourage growth and development within this industrial area in order to recover the costs for sanitary services constructed within Kingsway in 2007 that have not been used to their full potential to date.

Cesar Road Industrial Area

Existing Wastewater Servicing

The Cesar Road industrial area is located south of Big Nickel Road along Kelly Lake Road and Lorne Street, as well as along Cesar Road, in the Township of McKim. The industrial area is serviced by 400mm diameter, 600mm diameter, 750mm diameter, and 1,350mm diameter municipal trunk sanitary sewers within Kelly Lake Road, as well as 300mm diameter municipal sanitary sewers within Lorne Street that ultimately connect to the trunk sewers within Kelly Lake Road. There are no sanitary sewers within Cesar Road to service the existing industrial lands southwest of Kelly Lake Road. The area is serviced by the Sudbury Wastewater Treatment Plant (WWTP) located on the west side of Kelly Lake Road.

Proposed Wastewater Servicing

There are currently no municipal wastewater services within Cesar Road to service any future industrial areas. Any future developments would need to provide their own wastewater solution on site, or pump their flows via forcemain towards the existing sewers within Kelly Lake Road.

City of Greater Sudbury Sanitary Sewer Residual Modeling

The City of Greater Sudbury completed a theoretical sanitary model for the existing sanitary sewers within Kelly Lake Road north of the Sudbury WWTP as well as Kelly Lake Road south of the Sudbury WWTP which indicates existing residual capacity on a leg-by-leg basis and also anticipates what the required upgrades would be if the industrial lands were to build out over the next 15+ years. Based on the City's current residual capacity and future theoretical modeling for the existing sanitary sewers both north and south of the WWTP, there is residual capacity to allow for future industrial growth.

Valley East Industrial Area

Existing Wastewater Servicing

The Valley East industrial area is located south of Main Street along Belisle Drive and White Street, within the Township of Val Caron. The existing industrial area is serviced with 200mm and 300mm diameter municipal sanitary sewers within Belisle Drive, Lamondin Street, and White Street. Wastewater flows within Belisle Drive and White Street travel by gravity north into a 375mm diameter sanitary sewer and continue north of Main Street to the Hillsdale Lift Station. From the lift station, the flows are pumped through a forcemain to the Valley East Wastewater Treatment Plant (Valley East WWTP) located at west limits of Yorkshire Drive.

As per the City of Greater Sudbury's 2020 Wastewater Annual Report, the Valley East WWTP has a design capacity of 11,365 m³/day, with an average daily flow of 5,368 m³/day. There were two Plant By-Pass and Overflow incidents at the Valley East WWTP in 2020, mainly due to heavy rain and spring runoff in April.

R.V. Anderson completed flow monitoring within the existing sanitary sewers of the Valley East industrial area south of Main Street in 2010 and found that of the available design capacity of 70 l/s within the sanitary sewers, 9.59 l/s or 13.7% of capacity was being used. Of the 9.59 l/s of monitored flow, a total of 4.51 l/s was peak industrial flow, and a total of 5.08 l/s was extraneous flow. The wastewater within this area is serviced by the Valley East WWTP, and wastewater is processed and treated.

Proposed Wastewater Servicing

As noted above, the Valley East industrial area has capacity with the existing sanitary sewers. In order to bring additional industrial properties into the existing sanitary system, a sanitary sewer extension will be required within Belisle Drive south to Valleyview Road to allow for the lands south of Lamondin Street to connect to municipal sewers. Within the 2018 Water and Wastewater Master Plan there were no new sanitary sewers recommended within Belisle Street. Within the 2019 DC Background Study as well as the 2019-2021 Capital Budgets, the City has not included any new sanitary sewer for this industrial area.

City of Greater Sudbury Sanitary Sewer Residual Modeling

The City of Greater Sudbury completed a theoretical sanitary model for the existing sanitary sewers within Belisle Drive, Lamondin Street, and White Street, which indicates existing residual capacity on a leg-by-leg basis, and also anticipates what the required upgrades would be if the industrial lands were to build out over the next 15+ years. Based on the City's current residual capacity and future theoretical modeling for the existing sanitary sewers, there is residual capacity to allow for future industrial growth. There are also no current or future constraints within the sanitary sewers at their current size.

7.3.3 Summary

Introduction

The following infrastructure upgrades can be considered for each industrial area to allow for future lands to develop. Note that the suggested servicing/recommended design could be affected by potential future development proposals that arise in these areas, which may alter the design/scope/cost/timing of such improvements. Please refer to Appendix 3 for additional data.

Fielding Road/Duhamel Road Industrial Area

Based on the City's theoretical modeling for the potential industrial area north of Highway 55, there is capacity within the existing sanitary sewers, with a potential constraint within sanitary sewers identified as WAT-03-0041 and WAT-03-0043 where the residual capacities are reduced to 27.43 l/s and 23.44 l/s, respectively.

In reviewing R.V. Anderson's 2015 EA report for the potential sanitary servicing within the Fielding Road industrial area, it was determined that new sanitary sewers within Fielding Road and Nelson Road, as well as a lift station at the south end of Fielding Road and a forcemain crossing Highway 17, would be required to service the future industrial lands. The City has provided an updated estimate by R.V. Anderson which includes gravity sewers within Fielding Road, Nelson Road, Mumford Drive, and Duhamel Road, as well as a lift station and forcemain on Fielding Road and road restoration works in the amount of \$15,100,000 (2021).

Lasalle/Elisabella Industrial Area

The City has indicated that there is no existing residual capacity within the existing sanitary sewers in this area. R.V. Anderson recommended replacement of the sanitary sewer within Elisabella Street in their 2011 servicing report, as well as the extension and replacement of portions of the sanitary sewer within Lasalle Boulevard east of Elisabella Street to provide additional downstream capacity. The 2011 R.V. Anderson estimated cost, including road reconstruction, was \$5,090,000; the updated cost for the construction of new sanitary sewers is approximately \$6,300,000 (2021). In order to accommodate future industrial growth, the existing sanitary sewers are required to be upgraded and/or an inflow and infiltration program is required to reduce extraneous flows to allow for additional future capacity.

National Street Industrial Area

To facilitate new industrial development, the existing sanitary sewers are required to be upgraded for additional capacity as well as construction of new sanitary sewers up to O'Neil Drive West. There is also a requirement for sanitary sewer upgrades within the Maley Drive sewers downstream of National Street, as there is no residual capacity within the sewers to support added demand. The estimated cost for the upgrades of new sanitary sewers within National Street as well as new sanitary sewers and road within National Street to O'Neil Drive West is approximately \$4,076,700 (2021).

Maley Drive Industrial Area

The City of Greater Sudbury completed a theoretical sanitary model for the existing sanitary sewers within Maley Drive west of Falconbridge Highway and concluded that there is no existing residual downstream capacity. In order for the Maley Drive industrial area to be ready for future industrial development and to be considered available for the Job Site Challenge, the site needs to be serviced via a new municipal sanitary sewer within Maley Drive, east of Falconbridge Highway. The estimated costs total \$2,365,000, as per the City of Greater Sudbury's estimated pricing for Contract ENG18-35, updated to 2021 pricing.

Coniston Industrial Area

Based on the City of Greater Sudbury’s sanitary modeling for Allan Street, there is residual capacity to support some future industrial development. Within the existing sanitary sewers south of Government Road there is a minor amount of residual capacity available and zero theoretical capacity beyond 2036. If industrial growth is to occur in the Coniston area, south or east of Government Road, the existing sanitary sewers are required to be upgraded to allow for additional future capacity, at an estimated cost of \$420,000 (2021). If such growth is anticipated in the Coniston area east of Edward Avenue, south of Allan Street, the existing constraint within sanitary sewer NEE-07-0056 will require attention prior to allowing additional flows downstream.

Kingsway Industrial Area

There is currently an application for the development of Parts 27-33 of the Draft Plan prepared by J.L. Richards & Associates Limited for the construction of a Casino, Hotel, and Event Centre within the Kingsway industrial area – the Kingsway Entertainment District. The City provided services for this industrial area within the Kingsway in the form of sanitary and watermain upgrades. These service upgrades have not been used to their full potential since 2007, and the City has been waiting to recover funds from future industrial land development.

Based on the City’s current residual capacity and future theoretical modeling for the existing sanitary sewers within Kingsway west to the to the Sherwood Lift Station, as well as east and south to the Levesque Lift Station, there is residual capacity to allow for future industrial growth. There are no current or anticipated future restrictions within the main sewer within Kingsway east and south to the Levesque Lift Station. It would be beneficial for the City to encourage growth and development within this industrial area in order to recover these costs and have the services that were provided by the City over 15 years ago to be used to their potential.

Cesar Road Industrial Area

Based on the City’s current residual capacity and future theoretical modeling for the existing sanitary sewers north and south of the Sudbury WWTP, there is residual capacity to allow for future industrial growth in this area.

Valley East Industrial Area

In order to bring additional industrial parcels into the existing sanitary system, a new sanitary sewer extension is required within Belisle Drive south to Valleyview Road in order to allow for future development south of Lamondin Street to connect to the municipal system. Based on the City’s current residual capacity and future theoretical modeling for the existing sanitary sewers, there is residual capacity to allow for future industrial growth. There are also no current or future constraints within the sanitary sewers at their current size.

SUMMARY OF WASTEWATER ANALYSIS			
Industrial Area	Remaining Capacity	Estimated New Infrastructure Cost (2021)	Overview of Requirements to Support Future Development
Fielding Road/ Duhamel Road	Fielding Road (N/A). Magill Street – Yes. Mumford Drive/ Duhamel Road – Yes.	\$15,100,000	Fielding Road is not currently serviced by municipal sanitary sewers, but through privately-owned and maintained septic systems. As per R.V. Anderson's EA completed in 2015, there is a preferred solution which includes construction of new sanitary sewers within Fielding Road and Nelson Road, as well as a new lift station at the south end of Fielding Road, and a forcemain crossing Highway 17 to connect into the existing wastewater system south of Highway 17.
Lasalle/Elisabella	No	\$6,300,000	An extension from the existing sanitary sewer within Elisabella Street/Lapointe Street is required, as well as upgrades to the existing 300mm diameter sanitary sewer and/or an inflow and infiltration program to reduce extraneous flows and increase the capacity within the sewers.
National Street	No	\$4,076,700	Removal and replacement of existing sanitary sewers within National Street is required, as well as new sanitary sewers up to O'Neil Drive West. There is also a requirement for sanitary sewer upgrades within the downstream sewers within Maley Drive, as there is no residual capacity. Maley Drive upgrades are included below in the Maley Drive estimates.
Maley Drive	No	\$2,365,000	In order for the Maley Drive industrial area to be ready for future industrial development, the site needs to be serviced via a new municipal sanitary sewer within Maley Drive east of Falconbridge Highway, as well as upgraded sanitary sewers west of Falconbridge Highway. These new sewers would allow for greater capacity for the future large industrial area.
Coniston	Allan Street – Yes. South of Government Road – Minor residual capacity.	Allan Street – TBD. \$420,000 (South of Government Road)	An upgrade to the existing 200mm diameter sanitary sewer within Allan Street as well as the 200mm diameter sanitary within Government Road is required to facilitate new development.
Kingsway	Yes	\$0	Kingsway Entertainment District is to provide municipal services that not only service its own needs, but also are sized to direct and accommodate expected growth or development. These future services are to connect to existing services constructed by the City in 2007 within the Kingsway. The City will also be receiving funds from the landowners within this area as part of their development requirement based on By-Law 2014-3.
Cesar Road	Yes	\$0	Upgrades to the servicing within Kelly Lake Road to service future development are complete. There are no sanitary sewers within Cesar Road to service the existing industrial lands southwest of Kelly Lake Road (costing for such work has not been prepared).
Valley East	Yes	TBD.	A sanitary sewer extension will be required within Belisle Drive south to Valleyview Road to allow for the lands south of Lamondin Street to connect to municipal sewers.

Notes: On-site costs, or subdivision-related servicing costs, are not accounted for. Project costs identified in City documents/data have been inflated to 2021, unless otherwise noted.

7.4 Utilities Review

7.4.1 Background Information

The utility strategies provided in this section are based on the following reports and digital data:

- IESO.ca, Independent Electricity System Operator (IESO) website;
- Hydroone.ca, Hydro One website;
- 2020 Regional Infrastructure Plan (RIC), Hydro One, December 16, 2020; and,
- High Level Connections Options and Capacity Assessment, Hydro One, email of January 15, 2021.

7.4.2 Electrical

Overview

The electrical servicing for the City of Greater Sudbury is provided by Hydro One Networks Inc. for transmission and distribution, as well as Greater Sudbury Hydro Inc. The City of Greater Sudbury is serviced by the Martindale Transmission Station (TS) located south of Lasalle Boulevard, east of Barry Downe Road. As per the Sudbury/Algoma 2020 Regional Infrastructure Plan (RIP) prepared by Hydro One and dated December 16, 2020, the Martindale TS has capacity constraints. The RIP indicates that an end-of-life power transformer replacement is required, with a planned replacement in the year 2028. The report also indicates that the supply capacity constraint at the Martindale TS will be reassessed during the next Regional Planning Cycle. In August 2021, Hydro One announced that its five-year Investment Plan will upgrade infrastructure at transmission and distribution stations, including at Martindale.

At the request of SCS Consulting Group on behalf of the City of Greater Sudbury, Hydro One prepared a report entitled *High Level Connections Options and Capacity Assessment* for inclusion within this Employment Land Strategy (please refer to Appendix 3). As the exact location of future industrial load requirements are not yet known, Hydro One has assumed a 20MW load at a 0.9 power factor within each industrial area. They have also assumed that the City of Greater Sudbury will construct a new transformer station to supply the new industrial developments. Hydro One has confirmed that new customer transformer stations will be required for all of the industrial sites. The circuits identified for each site appear to have sufficient capacity to supply the assumed load of 20MW. All circuits discussed within this report, with exception of S5M and S6F, are network facilities that facilitate the flow of electrical power across the province. The power flow on these circuits vary based on different system conditions. Radial circuits, S5M and S6F have sufficient thermal capacity to supply load. Any impacts will be assessed through a formal System Impact Assessment (SIA)/Connection Impact Assessment (CIA).

Summary of Electrical

Hydro One has assumed that the City of Greater Sudbury will construct a new transformer station to supply the new industrial developments. Further, Hydro One has confirmed that new customer transformer stations will be required for all of the industrial sites. Therefore, there is no rationale, from an electricity infrastructure perspective, to prioritize future industrial development in one location over another.

SUMMARY OF ELECTRICAL SERVICE	
Industrial Area	Summary
Fielding Road/ Duhamel Road	Assuming similar loading is required for the future industrial areas, the two 230kV circuits have sufficient capacity available to supply an additional 20MW of load. Hydro One has concerns regarding new load capacity within the 115kV circuit
Lasalle/Elisabella	The connection option for this area is circuit L1S which is a 115kV circuit running between the Martindale TS and Crystal Falls TS. This circuit is lightly loaded, and capacity exists to supply additional load.
National Street	The best candidate for a connection supporting the National Street industrial area would be circuit L1S (as noted above for the Lasalle/Elisabella industrial area).
Maley Drive	Circuit H24S right-of-way runs through this area of interest. A customer-owned station could be built to allow for electrical connections.
Coniston	There is only one transmission connection option for this area, which is circuit L1S, as well as a requirement for a new customer-owned station.
Kingsway	Similar to the Coniston area, the Kingsway area would be required to connect to circuit L1S via a new customer-owned station.
Ceasar Road	The two 230kV circuits have sufficient capacity available to supply an additional 20MW of load. Hydro One has concerns regarding new load capacity within the 115kV circuit
Valley East	There is only one transmission connection option for this area, which is circuit S5M, as well as a requirement for a new customer-owned station.

7.4.3 Natural Gas

Overview

Enbridge Gas Inc. is the service supplier for the City of Greater Sudbury. At the request of SCS Consulting Group on behalf of the City of Greater Sudbury, Enbridge provided high-level information on the existing gas line infrastructure within each industrial area. Enbridge has noted that without knowing specific hourly load and delivery pressure requirements, they were not able to provide an assessment on available capacity for each industrial area.

Summary of Natural Gas

The exhibit below illustrates a summary of natural gas infrastructure.

SUMMARY OF NATURAL GAS SERVICE			
Industrial Area	High Pressure Industrial Applications (3,450 kPa)	Commercial or Light Industrial Applications (1,900 kPa)	Space Heating Applications (420 kPa)
Fielding Road/ Duhamel Road	Yes	Yes	Yes
Lasalle/Elisabella	Yes	Yes	Yes
National Street	No	Yes	Yes
Maley Drive	Yes	Yes	Yes
Coniston	No	No	Yes
Kingsway	No	No	Yes
Ceasar Road	Note 1	Yes	Yes
Valley East	No	Note 2	Yes

Note 1: There are existing gas lines within Kelly Lake Road rated for a maximum operating pressure of 1,900 kPa, and this line may be able to support higher minimum delivery pressures and heavier industrial usage, subject to detailed review and capacity analysis based on future specific development applications.

Note 2: There is a 2" steel line within Belisle Drive rated for a maximum operating pressure of 550 kPa, and that this line could support space heating loads and potentially light commercial/industrial applications, subject to detailed review and capacity analysis based on future specific development applications.

7.4.4 Telecommunications

Agilis Networks is the service supplier for the City of Greater Sudbury. At the request of SCS Consulting Group on behalf of the City of Greater Sudbury, Agilis Networks provided a high-level summary for the industrial lands regarding the availability of telecommunications.

Agilis Networks has indicated that each industrial area noted for this study has fiber communications available, with the exception of the Kingsway industrial area. Agilis is currently working on upgrading this area. Each industrial area can be serviced with fiber communications and be provided with high speeds between 1Gbps to 40Gbps, depending on the requirements of the industrial development.

8.0 RETURN ON INVESTMENT ANALYSIS

8.1 Introduction

In order to provide recommendations regarding the prioritizing of infrastructure/servicing expenditures to facilitate future development in the city’s employment areas, and to execute a return on investment (ROI) analysis, the Consultant Team and City staff identified eight industrial areas to explore: Fielding Road/Duhamel Road, Lasalle/Elisabella, National Street, Maley Drive, Kingsway, Coniston, Ceasar Road, and Valley East.

The preceding land supply analysis examined occupied (developed) and vacant (undeveloped) lands. A parcel was considered occupied if there was one or more buildings on the property – no matter how limited the site coverage may be (i.e., there could potentially be considerable excess land available for additional development). In this present analysis – now focused on the return on investment derived from prospective future infrastructure/servicing of employment areas – the Consultant Team has taken a more liberal approach to considering land availability on select larger parcels that could be suited for future development, and have adjusted upwards the quantum of “vacant” lands, as described below. In this adjusted methodology, certain large sites with only a modest site coverage have been included in the analysis in recognition of their potential to be significantly intensified over time across a large portion of the property. A prime example is the Maley Drive area, where there are existing operations with a very low site coverage that present the opportunity for considerable intensification/redevelopment to a more built-out condition.

8.2 Overview of Employment Areas

The following provides a brief synopsis regarding key considerations for each of the eight employment areas that were examined. Note that for some of the largest employment areas the amount of lands under consideration is capped at 125 gross hectares for the purpose of this analysis, since this represents the total indicated land requirement city-wide derived from our demand forecast modeling and related recommendations.

Fielding Road/Duhamel Road industrial area – Home to a significant number of mining supply and services businesses, Fielding Road is not currently serviced with a municipal water system, nor municipal sanitary sewers. Over 70 gross hectares of undeveloped land is located in this area, primarily oriented along existing roads. Local real estate market participants consistently cited this area as a prime development opportunity given its location on the west side of Sudbury and accessibility to active mining operations, which would suit a range of prospective occupiers.

In recent outreach work undertaken by City staff, local businesses cited the absence of in-place water and wastewater infrastructure to be a constraint on their ability to expand, a source of retention risk going forward (firms perhaps seeking an alternate location to do business), and a barrier to greater economic opportunities/business attraction (some companies were reluctant to make new investments without appropriate servicing in place).

Lasalle/Elisabella industrial area – This large area on Sudbury’s east side has an excessive supply of remaining vacant designated industrial land (approaching 175 gross hectares in total) compared to what is anticipated to be needed to satisfy forecast demand through 2046. Accordingly, the Consultant Team has limited our analysis to considering only a need for 125 gross hectares. Future development would likely be in the form of new subdivided lots, which are not presently in place.

National Street industrial area – New water and wastewater infrastructure in this area would enable the development of an additional 16 gross hectares of industrial land, oriented along the existing roadway. This would serve as a site selection option in the north part of Sudbury.

Maley Drive industrial area – This expansive area in northeast Sudbury – nearly 340 hectares in total – includes the Job Site Challenge lands discussed previously. Existing land uses limit the amount of presently undeveloped land parcels in this area, but there remains substantial capacity to intensify development in this location. Accordingly, the Consultant Team has adjusted the quantum of lands under consideration to the recommended 125 gross hectares through 2046.

Coniston industrial area – The Coniston industrial area is located on the eastern periphery of Sudbury. Current water infrastructure upgrades that are targeted for completion in 2022 are anticipated to fulfill servicing requirements for some time – unless the scope of development changes significantly. The necessary new water infrastructure to unlock the area’s full development potential across future employment lands (a new trunk watermain along Highway 17, estimated to cost \$50 million) also serves other municipal purposes. This project will be completed for safety purposes for the City’s water supply and will proceed independent of or regardless of a need to serve industrial lands in Coniston. The majority of the remaining undeveloped lands in this area are City-owned.

Due to the complexity and some uncertainty regarding inputs to this analysis (such as assigning a proportionate share of the overall project costs to Coniston’s industrial lands), an ROI assessment for this area is not provided at this time. An ROI analysis could be completed at a later date once the cost and timing of the trunk watermain become known, along with local servicing needs. Addressing issues related to new roads required to access any future development lands, as well as some challenging topography, is not within the scope of this study. Nonetheless, these issues require consideration in fully evaluating the prospects of future employment land development in this area.

Kingsway industrial area – At the time of this report, the City of Greater Sudbury had received applications for development by 1916596 Ontario Ltd. within the Kingsway industrial area to construct a Casino, Hotel, and Event Centre within Parts 27-33 of the Draft Plan of Subdivision for the Kingsway Industrial area – also known as the Jack Nicholas Business and Innovation Park. The broader area features nearly 150 gross hectares of land, although only the 125 gross hectares that has been recommended to be planned for through 2046 city-wide is included in our modeling. Of note, this latter figure excludes the parcels of land identified for the proposed Place of Amusement (Casino), Hotel, Event Centre, and overflow parking.

Cesar Road industrial area – The preceding analysis of infrastructure and servicing concluded that Kelly Lake Road offers complete servicing in place to facilitate future growth/intensification. However, the analysis of land supply revealed only limited vacant designated industrial land remaining. The obvious opportunity in this area is associated with the heavy industrial-designated lands to the west, along Cesar Road, which will require infrastructure upgrades to accommodate future development. The scope and cost of such infrastructure has not been identified, and is not explored further in this report.

Valley East industrial area –Valley East is home to only a limited extent of vacant industrial land (roughly 20 gross hectares). This built-up area offers a site selection alternative to lands in Sudbury.

8.3 Key Modeling Assumptions

The following provides a review of some of the key modeling inputs to the return on investment analysis that were presented earlier in this report.

Land area – The Consultant Team has previously recommended the provision of an additional 125 gross hectares of industrial land (100 net hectares) city-wide through 2046. Industrial-type employment growth modeled in the Reference Scenario generates demand for 42 net hectares (52.5 gross hectares) for industrial purposes. The figure of 125 gross hectares provides for a suitable surplus to ensure a broad range of options among prospective occupiers in terms of location, land pricing, servicing, and planning designation/permitted uses. The land supply work has been undertaken in gross hectares, assuming an 80% gross to net factor is needed to account for development constraints such as natural features (waterways, wetlands, forests, etc.), potential issues related to site grading (un-level sites), site configuration (irregular shapes that may limit developability), and in the case of undeveloped areas, a requirement to provide for roads and stormwater management before the actual developable lands can be created.

Site coverage – The Consultant Team has used a site coverage assumption of 20% for new industrial development in Greater Sudbury, guided by our previous analysis in this report.

Employment density – Based on our preceding analysis, an assumption of 31.25 jobs per gross hectare (25 jobs per net hectare) for industrial land has been modeled.

Infrastructure servicing costs by employment area – The Consultant Team, in collaboration with City staff, have identified the costs for water and wastewater infrastructure required to enable future industrial land absorption in each employment area. Notably, some industrial areas would accommodate new development in a linear form along established roadways (e.g., National Street and Fielding Road), while other larger areas (e.g., Maley Drive and Kingsway) will require the future subdivision of lots to enable larger-scale development, as well as new roads. The cost of this creation of development lots and roadways is unknown and has not been accounted for in the figures below.

Depending on the purpose/type/location of the required infrastructure, certain costs would be the responsibility of the municipality, while others would typically be borne by the private landowner(s). The estimated new infrastructure costs indicated below are total expenditures that do not differentiate between City versus landowner/developer, in terms of responsibility.

SUMMARY OF KEY ASSUMPTIONS		
Industrial Area	Vacant Land (gross ha)	Estimated New Infrastructure Cost (2021)
Fielding Road/ Duhamel Road	72.6	\$33,900,000
Lasalle/Elisabella	125.0	\$19,600,000
National Street	16.4	\$4,625,000
Maley Drive	125.0	\$4,845,000
Coniston	125.0	Note 1
Kingsway	125.0	\$0
Cesar Road	0.6	\$0
Valley East	19.0	\$570,000
<i>Note 1: Due to the complexity and some uncertainty regarding inputs to this analysis, an ROI assessment for Coniston is not provided at this time.</i>		

8.4 Municipal Finance Tools

8.4.1 Development Charges

Overview

The Development Charges Act (DCA) allows for the recovery of growth-related costs needed by new development. Section 2(4) of the DCA lists the services for which capital costs can be recovered through DCs imposed on new development, including the following (among many other services):

- Water supply and distribution;
- Wastewater treatment and sewers;
- Stormwater drainage and control services; and,
- Services related to a highway (roads);

The DCA requires that in the calculation of DCs for inclusion in a DC by-law, several steps need to be undertaken, with the key steps including the following:

- Estimate the anticipated development against which DCs can be imposed;
- Estimate the increased need for service attributable to the anticipated development;
- Reduce the estimated increased need for service by the degree to which excess capacity can be utilized;
- Assign a proportion of costs for the projects needed by increased development that would benefit existing development in a municipality;
- Reduce the net capital costs needed by development for any capital grants, subsidies, or other contributions made in respect of capital costs.

DCs may be imposed on a municipality-wide basis or through area-specific development charges (ASDCs).

Section 38 of the DCA states that if a municipality allows a person to perform works that relate to a service to which the DC by-law relates, that the municipality shall provide a DC credit towards the amount payable.

City-Wide Development Charges

The City of Greater Sudbury's present DC rates on non-residential development are shown in the exhibit below (effective through June 30, 2022).

CITY OF GREATER SUDBURY, NON-RESIDENTIAL DC RATES (IN EFFECT AS OF JULY 1, 2021 TO JUNE 30, 2022)			
Item	Industrial (\$psf)	Non-Industrial (\$psf)	
All Services	\$3.16	\$4.74	
Excluding Water Service	\$2.93	\$4.51	
Excluding Wastewater Service	\$2.10	\$3.68	
Excluding Water & Wastewater Service	\$1.87	\$3.45	

The City's DC by-law (2019-100) applies to all lands within the city; however, there are certain exemptions (some statutory, some non-statutory) for specific types of development, including the following:

- Enlargement of gross floor area of existing industrial building by 50% or less;
- Development designated for temporary use (less than eight months);
- Development in designated exempt area (as shown in Schedule E of By-law 2019-100);
- Full exemption for colleges, universities, and 50% exemption for development owned by a university used for purposes other than academic or research purposes; and,
- Demolition to allow for redevelopment, with previously paid DCs credited against the amount charged for the redevelopment (within five years of demolition).

City Council has discretion to exempt or reduce development charges on any particular type of development. Any non-statutory exemption or discount to DC rates and amounts payable by development must be funded by non-DC sources – typically the property tax base, user fees, and/or service charges. The cost of DC exemptions cannot be made up through higher DCs imposed on non-exempt or non-discounted forms of development.

The non-residential DC rates adopted by the City are significantly discounted from the DC rates calculated by Hemson Consulting Ltd. in the City’s 2019 DC Background Study, which are the maximum DC rates allowable under the legislation.

CITY OF GREATER SUDBURY, NON-RESIDENTIAL DC RATES (IN EFFECT AS OF JULY 1, 2021 TO JUNE 30, 2022)		
Item	Industrial	Non-Industrial
All Services – Calculated DC Rates (calculated in 2019 DC Study) (\$psf)	\$5.92	\$8.89
All Services – Adopted DC Rates (as adopted in By-law 2019-100) (\$psf)	\$2.96	\$4.45
Discount – Adopted vs. Calculated	50%	50%
All Services – Current DC Rates (indexed since 2019) (\$psf)	\$3.16	\$4.74
Indexing Since 2019 DC By-law	6.6%	6.6%

Area-Specific Development Charges

The DCA states that Councils must give consideration to the use of area rating, otherwise known as area-specific development charges (ASDCs). ASDCs are used by numerous municipalities in Ontario, usually in instances where there is a clear benefit from capital work(s) for a specific geographic area of a municipality. The ASDC may be limited to certain specific services related to the subject geography, or may be for all municipal services so long as the works do not benefit a broader area of the municipality.

One issue with ASDCs is that the DCA requires that funds raised for a specific municipal service or geography can only be used for that purpose, meaning that ASDC revenues – if the services or geography used to devise the charge are too narrow – may present risk to a municipality if a high proportion of development in the defined geography does not occur as anticipated, or if the ASDC rates for a specific service result in ASDC rates that are vastly different than those imposed municipality-wide and create incentives to locate in lower-cost environments.

Currently, the City of Greater Sudbury does not impose ASDCs, but given the geographic expanse of the city, it may be worth monitoring whether the need may emerge in the future.

Front-End Financing

Section 44 of the Development Charges Act permits municipalities to enter into front-ending agreements that allows those developing land to provide for the costs of work to be done, with a reimbursement made by a municipality in the future (typically through future DC revenues when generated by other benefitting development).

Determining DC Eligibility vs. Developer-Funded

Section 59 of the Development Charges Act states that DCs cannot be imposed to fund local services and DC-eligible works cannot be included as a condition of draft plan approval – at least not without providing DC credits. Most municipalities in Ontario incorporate local service policies into the required Development Charge Background Studies that set out guidelines for what type or size of capital works are to be funded directly by developers, or what works are eligible for DC funding.

As of the City's 2019 Development Charges Background Study, there is no set of local service policies included. It is recommended that to minimize confusion regarding what is a local work or a DC-eligible work and to ensure that prospective developers understand what costs they may have to incur directly, that the City incorporate a set of local service policies in its next DC background study process.

8.4.2 Debt Financing

According to the City's 2019 Financial Information Return (FIR), Greater Sudbury had \$8.75 million in net debt charges and \$441.9 million in net revenues, meaning that the City's debt charges amounted to 1.98% of net revenues. This is significantly below the Provincial Guideline of 25%.

The Development Charges Act allows for the recovery of debenture costs through a DC by-law, including not only the principal repayment costs, but also the interest costs associated with the debenture.

8.5 Incremental Revenues and Costs

8.5.1 Introduction

The following section provides a discussion of some of the key modeling inputs to the return on investment calculations. There are several key data sources used in formulating the fiscal impact model:

- Financial Information Return data submitted annually by Ontario municipalities to the Ministry of Municipal Affairs and Housing;
- The City of Greater Sudbury's 2019 Development Charges Background Study; and,
- Municipal Property Assessment Corporation (MPAC) assessment data.

8.5.2 Estimating Additional Revenues

Annual Property Taxes

Altus Group has been provided with MPAC data for all occupied and vacant parcels within the City's eight employment areas. The focus of this analysis is properties that are designated industrial. Based on the MPAC data, vacant industrial land has an average assessment value of \$73,300 per hectare (\$29,700 per acre), while developed lands have an average assessment value of \$264,700 per hectare (\$107,100 per acre). However, when a sub-set of lands ranging in size from 0.4-5.0 hectares (1-10 acres) in size is considered – which account for the majority of the industrial development in these areas (roughly 80% share of all developed properties) – the average vacant assessed land value is approximately \$285,000 per hectare (\$115,000 per acre). Developed properties in this size range have an average assessed value of \$933,000 per hectare (\$378,000 per acre), or \$846 per m² of floor area (\$79 psf of floor area).

The additional incremental value for developed lands would generally be associated with the site improvements, such as servicing, buildings, and other installed equipment. The uplift per hectare of developed land, using either all sites, or only the sub-set of lands sized between 0.4-5.0 hectares, based on the building area constructed on the occupied parcels, equates to an uplift of approximately \$585-\$588 per m² of building space, or \$54.40-\$54.65 psf. The analysis henceforth will use a blended assumption of \$54.50 psf or \$587 per m².

ASSESSMENT VALUE OF VACANT AND OCCUPIED INDUSTRIAL LANDS				
Type of Parcel	Average Assessment Value (per ha)	Land Area (ha)	Building Area (m ²)	Assessment Value (\$)
All Sites				
Vacant Sites	\$73,300	441	N/A	\$32.3 million
Occupied Sites	\$264,700	764	249,900	\$202.4 million
Sites 0.4-5.0 Hectares (1-10 Acres) in Size				
Vacant Sites	\$284,700	46	N/A	\$13.1 million
Occupied Sites	\$933,200	160	176,200	\$149.1 million
<i>Source: Altus Group based on MPAC</i>				

ESTIMATED BREAKDOWN OF VALUE FOR OCCUPIED SITES				
Parcel Component	Average Assessment Value per Unit	Land Area (ha)	Building Area (m ²)	Assessment Value (\$)
All Sites				
Land	\$73,300/ha	764	N/A	\$56.1 million
Building	\$585/m ²	N/A	249,900	\$146.3 million
Sites 0.4-5.0 Hectares (1-10 Acres) in Size				
Land	\$284,700/ha	46	N/A	\$45.5 million
Building	\$588/m ²	N/A	176,200	\$103.6 million
<i>Source: Altus Group based on MPAC</i>				

At the assumed 20% site coverage, the forecast 42 net developable hectares of industrial demand to the year 2046 equates to 1.7 net developable hectares of demand per year, or development potential of 3,360 m² of net new industrial space year (approximately 36,200 sf). The additional demand equates to a total of 84,000 m² of net new industrial floorspace to the 2046 horizon (approximately 900,000 sf). Based on the estimated additional assessment value that would be generated by the development potential (\$587 per m², or \$54.50 psf), the 84,000 m² of development potential that the servicing of employment lands would enable would add roughly \$49.3 million in net new taxable assessment value for the City.

It has been assumed that intensification of existing occupied employment lands will not be relied upon for the return on infrastructure investment analysis, as this would depend on individual business decisions by current owners or occupiers of buildings on each site. However, the potential for substantial increases in development potential on these occupied lands makes any estimate of return on investment somewhat conservative.

Any increased tax assessment on presently occupied sites that is associated with future intensification would be comparable to new greenfield industrial development, while potentially leveraging existing remaining infrastructure capacity. Hence, the ROI of industrial intensification is considered at a minimum to be comparable, if not likely superior, to industrial development on vacant lands – particularly when substantial new or upgraded infrastructure is needed to facilitate growth.

It is not within the scope of this study to attempt to identify the theoretical ROI impact across existing industrial areas that would see a transition from vacant and unserviced to vacant, serviced lands. Rather, the focus is on examining the ROI across different scenarios exploring the provision of 100 net hectares of fully serviced industrial land to accommodate the recommended land demand city-wide through the forecast horizon.

ESTIMATED ANNUAL DEVELOPMENT POTENTIAL	
Variable	Value
Estimated Demand for Land to 2046 (gross)	52.5 gross ha
Estimated Demand for Land to 2046 (net)	42 net ha
Assumed Site Coverage	20%
Estimated Net New Development Potential to 2046	84,000 m ²
Estimated Net New Development Potential per Year (2021-2046)	3,360 m ² /year
Assessment Value Uplift	\$587 per m ²
TOTAL ESTIMATED ASSESSMENT VALUE UPLIFT BY 2046	\$49.3 million
<i>Note: This estimated demand for land reflects the land demand model Reference Scenario of 42 net hectares (52.5 gross hectares), not the 100 net hectares (125 gross hectares) that is the recommended amount of industrial land to plan for through 2046.</i>	

Water and Wastewater Rate Revenues

The amount of water and wastewater rate revenues depends on the usage or demand for water or wastewater, which can vary significantly depending on the type of non-residential use, particularly industrial uses. The City's By-law 2022-06 sets out the fixed and variable charges (refer to exhibit below). As the amount of water demand and wastewater flows depends on the end-users of newly serviced land and newly constructed buildings, we have not attempted to estimate future water/wastewater rate revenues. Similarly, later in this report, benchmarks for operating and lifecycle costs associated with water treatment and wastewater treatment are provided, but the exact costs could vary significantly depending on the user profile of the employment lands to be serviced. Since this uncertainty is equivalent regardless of which employment area is prioritized for servicing, and assuming that the City's water/wastewater rates could be adjusted based on the actual incremental needs generated by end users, it is assumed that the prospective water/wastewater revenues would offset the variable incremental operating and lifecycle costs for water/wastewater treatment.

ESTIMATED BREAKDOWN OF VALUE FOR OCCUPIED SITES		
Item	Water	Wastewater
Consumption Charge		
	\$1.984/m ³	\$2.234/m ³
Fixed Charge		
5/8 and 3/4 inches	\$24.49/month	\$27.65/month
1 inch	\$61.24/month	\$69.14/month
1 1/2 inches	\$122.48/month	\$138.28/month
2 inches	\$195.97/month	\$221.25/month
3 inches	\$391.93/month	\$442.49/month
4 inches	\$612.40/month	\$691.40/month
6 inches	\$1,224.79/month	\$1,382.79/month
8 inches	\$1,959.67/month	\$2,212.47/month
10 inches	\$2,817.02/month	\$3,180.42/month
<i>Note: Wastewater is 112.9% of water rates.</i>		

8.5.3 Estimating Additional Operating Costs of Municipal Service Delivery from New Non-Residential Development

To estimate the incremental operating costs to the City of new development, we have employed an average cost model that takes existing operating costs and converts them to a per capita or per job basis based on existing levels of population and employment, and estimated shares of costs attributable to each of the residential and non-residential sectors. This is an appropriate approach for costs such as municipal governance, protection services (fire, police, courts), transit, parking, solid waste collection, public health, social services, as well as parks and recreation service, which are generally based on the amount of population and jobs in a municipality. The incremental expenditures are estimated using the following approach:

1. Obtain the operating expenditures of the City in 2019 from Schedule 40 of the City's 2019 Financial Information Return;⁶
2. Expenditures for each service relating to long-term debt interest, amortization, and any user fee and service charge revenues associated with each service are then deducted to reach net operating expenditures;
3. Deductions are also made for grants that are provided by the Federal Government, Provincial Government, and other municipalities to fund City administered services, such as social assistance, childcare, and public housing.
4. To estimate the degree to which the net operating expenditures will increase in step with growth, a "growth-related factor" is applied to the net operating expenditures, to reach net growth-related operating expenditures. In most cases, the need for services will generate a nearly proportional increase in operating costs, with a small allowance made for efficiencies and economies of scale. Other services will grow at a much slower pace than population growth, such as government and planning department costs.

⁶ Even though more recent data is available for the fiscal year 2020, given the impacts on municipal costs and revenues from COVID-19, the data used in this report is based on the 2019 FIR instead of 2020.

5. A share of the net growth-related operating expenditures is allocated to non-residential growth by applying residential/non-residential factors to each service based on typical usage and/or the prevailing residential/non-residential split in the city. The result of this calculation is known as the net residential growth-related operating expenditures.

Based on our review, the cost to the City of providing municipal services to non-residential development equates to roughly \$800 per job per year. This would account for incremental operating costs for services such as fire, police, winter maintenance of roads, transit, solid waste collection, waste diversion, and traffic operations, among other things. By comparison, at build-out (at the end of the forecast horizon), this non-residential development is estimated to generate \$2.9 million in nominal property tax revenues per year, or roughly \$2,770 in property tax revenues per employee per year.

It is noted that the \$800 per job in incremental operating costs would generally be consistent from one industrial area to the next, though there could be some variances from this estimate if the City provides servicing to two separate employment areas (rather than a single area), which may create some inefficiencies in incremental service expansion. For example, whereas the servicing of one employment area may give rise to a need for one additional bus route, servicing two employment areas may require two additional bus routes (one each).

In estimating the amount of employment generated from the net new development forecast for vacant industrial lands in the City, 80 m² per job is utilized, consistent with the land demand modeling Reference Scenario presented earlier in the report. In total, based on the estimated 84,000 m² of net new industrial space, there would be 1,049 net new jobs. At \$800.61 per employee, this would equate to an additional \$840,600 in net new incremental operating costs incurred by the City annually by 2046 to be funded by the property tax base or other user fees and service charges.

8.6 Operating and Lifecycle Cost Benchmarks – Roads

Benchmark costs for annual operating and lifecycle costs per lane km of road have been calculated by using a five-year average from the data taken from the Financial Information Returns of the City of Greater Sudbury for each year for the period 2015-2019. The benchmark annual operating costs amounts to \$5,025 per lane km of road. The annual lifecycle costs per lane km of road is estimated to be \$4,381 per lane km.

OPERATING COST – ROADS						
Year	Annual Operating Costs (\$)	Less: Interest on Long-Term Debt (\$)	Less: Amortization (\$)	Net Operating Expenditures (\$)	Units (Lane km)	Operating Costs per Unit (\$ per Lane km)
2015	\$37,730,230	\$0	\$27,317,773	\$10,412,457	3,011	\$3,458
2016	\$43,520,406	\$0	\$27,432,628	\$16,087,778	3,011	\$5,343
2017	\$44,625,755	\$0	\$27,508,323	\$17,117,432	2,885	\$5,933
2018	\$40,333,553	\$0	\$27,621,558	\$12,711,995	2,886	\$4,405
2019	\$46,252,917	\$0	\$28,828,776	\$17,424,141	2,911	\$5,986
ANNUAL OPERATING COSTS PER KM						\$5,025

LIFECYCLE COST – ROADS						
Year	Value of Infrastructure (\$)	Units (Lane km)	Value per Unit (\$ per Lane km)	Useful Life (Years)	Sinking Fund Factor	Annual Lifecycle Cost (\$)
2015	\$1,045,447,625	3,011	\$347,209	50	0.0118	\$4,097
2016	\$1,053,744,492	3,011	\$349,965	50	0.0118	\$4,130
2017	\$1,076,854,699	2,885	\$373,260	50	0.0118	\$4,404
2018	\$1,100,584,953	2,886	\$381,353	50	0.0118	\$4,500
2019	\$1,177,865,756	2,911	\$404,626	50	0.0118	\$4,775
ANNUAL LIFECYCLE COSTS PER KM						\$4,381

8.7 Operating and Lifecycle Cost Benchmarks – Water and Wastewater

8.7.1 Operating Cost Benchmarks

The estimated annual operating and lifecycle costs of the water and wastewater systems help identify the cost obligations of the municipality for additional infrastructure installed. The calculation of annual incremental operating costs for water and wastewater services are more appropriately done on a per unit basis (per km, per megalitre, etc.) than a per capita basis, as each development will have differing infrastructure needs.

Benchmark costs for annual operating and lifecycle costs per megalitre of water or wastewater treated, and per kilometre of water or wastewater pipes, have been calculated by using a five-year average from the data taken from the Financial Information Returns of the City of Greater Sudbury for each year for the period 2015-2019.

The benchmark annual operating costs for water and wastewater treatment amount to \$583 per megalitre of water treated, and \$520 per megalitre of wastewater treated. For water distribution and wastewater collection, the annual operating cost benchmarks are \$12,521 per km and \$9,465 per km, respectively.

WATER AND WASTEWATER OPERATING COST BENCHMARKS						
Year	Annual Operating Costs (\$)	Less: Interest on Long-Term Debt (\$)	Less: Amortization (\$)	Net Operating Expenditures (\$)	Units (mL or km)	Operating Costs per Unit (\$ per mL)
Water Treatment						
2015	\$12,109,664	\$170,990	\$2,379,153	\$12,782,409	18,766	\$681
2016	\$12,289,924	\$160,985	\$2,435,711	\$9,693,228	18,766	\$517
2017	\$13,273,584	\$150,431	\$2,759,361	\$10,363,792	18,339	\$565
2018	\$14,180,496	\$139,298	\$2,779,752	\$11,261,446	20,056	\$562
2019	\$14,515,734	\$127,556	\$2,802,798	\$11,585,380	19,597	\$591
ANNUAL OPERATING COSTS PER MEGALITRE (ML)						\$583

Water Distribution						
2015	\$17,831,217	-	\$4,731,501	\$13,099,716	949	\$13,804
2016	\$16,019,881	-	\$4,793,892	\$11,225,989	949	\$11,829
2017	\$16,666,585	-	\$4,866,632	\$11,799,953	951	\$12,408
2018	\$16,146,373	-	\$4,909,162	\$11,237,211	951	\$11,816
2019	\$17,128,776	-	\$4,994,514	\$12,134,262	952	\$12,746
ANNUAL OPERATING COSTS PER KM						\$12,521
Wastewater Treatment						
2015	\$21,114,552	\$1,204,512	\$7,127,631	\$12,782,409	30,368	\$421
2016	\$24,183,538	\$1,868,413	\$6,689,839	\$15,625,286	30,368	\$515
2017	\$24,254,433	\$1,804,552	\$6,771,368	\$15,678,513	30,766	\$510
2018	\$24,045,032	\$1,737,970	\$6,886,208	\$15,420,854	24,803	\$622
2019	\$24,986,366	\$1,668,394	\$6,960,972	\$16,357,000	30,668	\$533
ANNUAL OPERATING COSTS PER MEGALITRE (ML)						\$520
Wastewater Collection						
2015	10,981,238	-	3,442,319	7,538,919	778	9,690
2016	10,618,495	-	3,464,447	7,154,048	778	9,195
2017	10,208,283	-	3,504,664	6,703,619	780	8,594
2018	11,352,501	-	3,557,627	7,794,874	780	9,993
2019	11,400,380	-	3,707,929	7,692,451	781	9,849
ANNUAL OPERATING COSTS PER KM						\$9,465

8.7.2 Annual Lifecycle Cost Benchmarks

The benchmark annual lifecycle contributions are necessary to understand the annual costs to be set aside to ensure full funding of future replacement costs for water and wastewater infrastructure. The annual lifecycle cost benchmarks for water/sewage treatment amount to \$148 per megalitre of water treated, and \$318 per megalitre of wastewater treated. For water distribution and wastewater collection, the benchmark annual lifecycle contributions necessary to fund future replacement costs are \$7,534 per km and \$8,080 per km, respectively.

WATER AND WASTEWATER LIFECYCLE COST BENCHMARKS						
Year	Value of Infrastructure (\$)	Units (mL or km)	Value per Unit (\$)	Useful Life (Years)	Sinking Fund Factor	Annual Lifecycle Cost (\$)
Water Treatment						
2015	\$82,385,274	18,766	\$4,390	50	0.0118	\$140
2016	\$90,308,875	18,766	\$4,812	50	0.0118	\$153
2017	\$90,910,416	18,339	\$4,957	50	0.0118	\$158
2018	\$89,840,681	20,056	\$4,479	50	0.0118	\$143
2019	\$90,669,078	19,597	\$4,627	50	0.0118	\$147
ANNUAL LIFECYCLE COSTS PER MEGALITRE (ML)						\$148

Water Distribution						
2015	\$293,644,846	949	\$309,426	100	0.0032	\$7,180
2016	\$299,162,257	949	\$315,239	100	0.0032	\$7,314
2017	\$311,099,293	951	\$327,129	100	0.0032	\$7,590
2018	\$316,120,824	951	\$332,409	100	0.0032	\$7,713
2019	\$322,925,384	952	\$339,207	100	0.0032	\$7,871
ANNUAL LIFECYCLE COSTS PER KM						\$7,534
Wastewater Treatment						
2015	\$292,617,034	30,368	\$9,636	50	0.0118	\$307
2016	\$295,260,255	30,368	\$9,723	50	0.0118	\$309
2017	\$297,228,391	30,766	\$9,661	50	0.0118	\$307
2018	\$277,439,599	24,803	\$11,186	50	0.0118	\$356
2019	\$298,600,986	30,668	\$9,737	50	0.0118	\$310
ANNUAL LIFECYCLE COSTS PER MEGALITRE (ML)						\$318
Wastewater Collection						
2015	\$260,906,608	778	\$335,356	100	0.0032	\$7,781
2016	\$264,560,110	778	\$340,052	100	0.0032	\$7,890
2017	\$269,978,172	780	\$346,126	100	0.0032	\$8,031
2018	\$277,439,599	780	\$355,692	100	0.0032	\$8,253
2019	\$284,280,754	781	\$363,996	100	0.0032	\$8,446
ANNUAL LIFECYCLE COSTS PER KM						\$8,080

8.7.3 Summary of Operating and Lifecycle Cost Benchmarks for Water and Wastewater Systems

In total, the operating and lifecycle costs for water and wastewater infrastructure installed is estimated to be \$731 per megalitre of water treatment, \$20,055 per km of water distribution, \$838 per megalitre of wastewater treatment, and \$17,545 per km of wastewater collection infrastructure.

ESTIMATED ANNUAL OPERATING & LIFECYCLE COSTS OF WATER & WASTEWATER INFRASTRUCTURE			
	Operating	Lifecycle	Total
Water			
Water Treatment (\$/mL)	\$583	\$148	\$731
Water Distribution (\$/km)	\$12,521	\$7,534	\$20,055
Wastewater			
Wastewater Treatment (\$/mL)	\$520	\$318	\$838
Wastewater Collection (\$/km)	\$9,465	\$8,080	\$17,545

8.8 Estimates of Incremental Operating and Lifecycle Costs

For use in the ROI Calculator tool, with the lengths of the infrastructure to be constructed, and the benchmarks for operating and lifecycle costs, a calculation can be undertaken that estimates the annual costs to the City of servicing each employment area compared against the estimated property tax revenue uplift. These figures include only new infrastructure additions/extensions; upgrades to existing infrastructure are excluded from these calculations, as these are already accounted for in the municipal budget.

LENGTH OF NEW INFRASTRUCTURE AND ESTIMATED ANNUAL OPERATING AND LIFECYCLE COSTS								
Industrial Area	Length of New Infrastructure		Water		Wastewater		Totals	
	Water	Wastewater	Operating	Lifecycle	Operating	Lifecycle	Operating	Lifecycle
Fielding Road/ Duhamel Road	4,538 m	3,778 m	\$56,800	\$34,200	\$3,600	\$3,100	\$60,400	\$37,200
Lasalle/Elisabella	N/A	900 m	N/A	N/A	\$8,500	\$7,300	\$8,500	\$7,300
National Street	750 m	800 m	\$9,400	\$5,700	\$7,600	\$6,500	\$17,000	\$12,100
Maley Drive	460 m	663 m	\$5,800	\$3,500	\$6,300	\$5,400	\$12,000	\$8,800
Kingsway	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ceasar Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Valley East	246 m	N/A	\$3,100	\$1,900	N/A	N/A	\$3,100	\$1,900

8.9 Comparison of Potential Property Tax Uplift with Estimated Infrastructure Costs

All of the infrastructure investments required to service the city’s employment areas are compared to the property tax revenue that could be generated for the City from the maximum potential redevelopment potential of vacant lands within each employment area.

COMPARISON OF INCREMENTAL PROPERTY TAX REVENUE WITH CAPITAL COSTS						
Industrial Area	Vacant Land (gross ha)	Additional Development Potential (m ²)	Max Development Potential to 2046 (84,000 m ² city-wide)	Incremental Assessment Value to 2046	Incremental Property Tax Value (50 Years, discounted at 3%/Annum)	Capital Costs to Service Employment Area
Fielding Road/ Duhamel Road	72.6	116,200	84,000	\$49.3 million	\$48.8 million	\$33.9 million
Lasalle/Elisabella	125.0	200,000	84,000	\$49.3 million	\$48.8 million	\$19.6 million
National Street	16.4	26,200	26,200	\$15.4 million	\$21.1 million	\$4.6 million
Maley Drive	125.0	200,000	84,000	\$49.3 million	\$48.8 million	\$4.8 million
Kingsway	125.0	200,000	84,000	\$49.3 million	\$48.8 million	\$0
Ceasar Road	0.6	1,038	1,038	\$0.6 million	\$0.95 million	\$0
Valley East	19.0	30,400	30,400	\$17.8 million	\$23.9 million	\$0.6 million

ESTIMATED INCREMENTAL INFRASTRUCTURE OPERATING AND LIFECYCLE COSTS FOR CAPITAL INFRASTRUCTURE						
Industrial Area	Vacant Land (gross ha)	Estimated New Infrastructure Cost (2021)	Estimated Incremental Infrastructure Cost (50 Years, Discounted at 3%/Annum)			Estimated Total Incremental Cost per Gross Hectare
			Operating Costs	Lifecycle Costs	Total Cost	
Fielding Road/ Duhamel Road	72.6	\$33,900,000	\$1,600,600	\$987,000	\$2,587,600	\$35,600
Lasalle/Elisabella	125.0	\$19,600,000	\$225,800	\$192,700	\$418,500	\$3,300
National Street	16.4	\$4,625,000	\$449,500	\$321,100	\$770,600	\$47,000
Maley Drive	125.0	\$4,845,000	\$318,900	\$233,800	\$552,800	\$4,400
Kingsway	125.0	\$0	N/A	N/A	N/A	N/A
Ceasar Road	0.6	\$0	N/A	N/A	N/A	N/A
Valley East	19.0	\$570,000	\$81,600	\$49,100	\$130,700	\$6,900

The exhibit below estimates the annual general operating costs that the absorption of employment lands and accommodation of the associated jobs would generate for the City, based on the application of the general operating cost benchmark of \$800.61 per job. These general operating costs are then added to the estimated annual operating and lifecycle costs generated by the infrastructure needs to estimate the total costs to the City.

ESTIMATED INCREMENTAL GENERAL OPERATING COST – GENERAL MUNICIPAL SERVICES, PER YEAR					
Industrial Area	Employees (at Build-Out)	Total General Operating Cost (50 Years)	Total Infrastructure Operating & Lifecycle Costs (50 Years)	Capital Costs	Total Costs
Fielding Road/ Duhamel Road	1,050	\$14,122,600	\$2,587,600	\$33,900,000	\$50,610,200
Lasalle/Elisabella	1,050	\$14,122,600	\$418,500	\$19,600,000	\$34,141,100
National Street	328	\$6,111,800	\$770,600	\$4,625,000	\$11,482,400
Maley Drive	1,050	\$14,122,600	\$552,800	\$4,845,000	\$19,475,400
Kingsway	1,050	\$14,122,600	N/A	\$0	\$14,122,600
Ceasar Road	13	\$275,300	N/A	\$0	\$275,300
Valley East	380	\$6,918,100	\$130,700	\$570,000	\$7,648,800

The exhibit below compares the following:

- The total costs (as estimated in the exhibit above) to the estimated property tax revenue that the build-out of each employment area would generate over a 50-year horizon;
- The estimated incremental tax revenues less the total infrastructure costs (capital costs plus operating and lifecycle costs plus general operating cost); and,
- The total infrastructure cost per hectare of industrial land.

COMPARING INCREMENTAL REVENUES WITH INCREMENTAL COSTS (OPERATING, LIFECYCLE AND CAPITAL) BY EMPLOYMENT AREA						
Industrial Area [A]	Vacant Land (gross ha) [B]	Potential Incremental Property Tax Value (over 50 Years) [C]	Total Costs (over 50 Years) [D]	Ratio of Revenue to Cost [E]	Incremental Tax Revenue Less Total Costs [D-C]	Total Cost per Hectare of Vacant Land [F]
Fielding Road/ Duhamel Road	72.6	\$48.8 million	\$50.6 million	\$0.96 to 1	-\$1.8 million	\$700,000
Lasalle/Elisabella	125.0	\$48.8 million	\$34.1 million	\$1.43 to 1	\$14.7 million	\$270,000
National Street	16.4	\$21.1 million	\$11.5 million	\$1.84 to 1	\$9.6 million	\$700,000
Maley Drive	125.0	\$48.8 million	\$19.5 million	\$2.51 to 1	\$29.3 million	\$160,000
Kingsway	125.0	\$48.8 million	\$14.1 million	\$3.46 to 1	\$34.7 million	\$110,000
Ceasar Road	0.6	\$0.95 million	\$0.28 million	\$3.46 to 1	\$0.67 million	\$470,000
Valley East	19.0	\$23.9 million	\$7.6 million	\$3.13 to 1	\$16.3 million	\$400,000

The preceding analysis is meant to inform the City, at a high level, of the prospective revenue and cost implications of the required infrastructure servicing to promote future land development in the seven industrial areas examined (excluding Coniston). Further, it is intended to provide general directional conclusions related to the servicing of each industrial area (positive impact or negative impact) and comparability across different scenarios, or combinations of scenarios.

In conclusion, this comparison of costs to service each employment area and the associated revenues that would be generated shows that in each instance, the revenues generated meet (Fielding Road/Duhamel Road – this option is essentially revenue-neutral) or exceed (all other areas) the required costs of servicing. In other words, the provision of the required infrastructure in any of the areas results in a positive return on investment (with the exception of Fielding Road/Duhamel Road, where total costs over a 50-year horizon slightly exceed potential incremental property tax value over the same time period).

8.10 Additional Analysis Tool

The preceding analysis examines the revenue and cost impacts of servicing different employment areas across the city, and provides a high-level analysis of what the overall return on investment for the City is likely to be. Altus Group will also prepare a separate, standalone ROI Calculator tool that utilizes the various benchmarks and assumptions incorporated into the analysis, but allows for customized analysis based on varying inputs.

Given that some of the employment areas alone would not fulfill all of the city's projected demand for new industrial land (e.g., Ceasar Road, National Street, Valley East, and Fielding Road/Duhamel Road), in some cases, scenarios would have to be tested based on some combination of infrastructure investment in multiple employment areas to ensure that adequate infrastructure investment is made to satisfy the full demand for lands being projected. Other employment areas (e.g., Lasalle/Elisabella, Maley Drive, and Kingsway) would be able to entirely satisfy the projected demand for space on their own. Ultimately, the City should ensure that sufficient vacant serviced land supply is available to cover off market contingencies to offer an adequate range of lands to prospective users.

8.11 Perspectives on Infrastructure Investment

8.11.1 Introduction

The preceding analysis of employment land supply across the City of Greater Sudbury identified an excess of industrial-designated lands to accommodate the forecast land demand through 2046. However, the status of land servicing and infrastructure capacity must also be considered. The Consultant Team's assessment of water, wastewater, and utilities infrastructure across eight industrial areas identified the required investments to bring these lands to a shovel-ready state, or to add the required capacity to support growth. Drawing upon this information, the Consultant Team may strategically examine the opportunities in each area in order to provide guidance to City staff and Council to support future decision-making.

8.11.2 Serviced Industrial Land Requirement

The earlier analysis of employment growth by industry, as well as site coverage and employment density benchmarks, led to a forecast requirement for approximately 42 net hectares of industrial land through 2046. The Consultant Team recommends planning for 100 net hectares of land to ensure sufficient site selection options for prospective users, as well as to offer accommodation for land-extensive uses that may emerge. Several of the industrial areas offer significantly more land supply than is required to meet this target. The economic benefits of providing services to multiple employment areas must be weighed against the initial capital and ongoing operating and lifecycle costs associated with such infrastructure building.

8.11.3 Locational Analysis of Recent New Industrial Construction

The analysis of new industrial building permit activity over approximately the past decade led to two key observations:

- Activity was widespread geographically, with new building permits identified across Greater Sudbury. Three or more permits were issued on the following roads: Belisle Drive (6), Magill Street (4), Lasalle Boulevard (4), Mumford Drive (4), Fielding Road (3), and National Street (3). These 24 permits represented just over a 40% share of the total number of new industrial building permits issued from 2011-2019.
- Activity was particularly high in the Fielding Road/Duhamel Road industrial area, as well as along Magill Street, which was the most concentrated of all industrial areas in terms of recent new construction. Altogether, there were 12 permits issued in this part of the city, representing just over a 20% share of the total number of new industrial building permits issued from 2011-2019.

This building permit activity mirrors the sentiments that Consulting Team personnel identified in our stakeholder consultations, which consistently reinforced the importance of the Fielding Road area as a site for mining-related businesses, and an overall sense that there was no clear second preferred location within the city (various locations featured site selection attributes that appealed to users for different reasons).

8.11.4 Linear versus Greenfield New Development

Some of the industrial areas examined (e.g. Fielding Road/Duhamel Road and National Street) would incorporate new/upgraded municipal infrastructure along established roadways, while others (Lasalle/Elisabella, Maley Drive, Coniston, Kingsway, and Valley East) would involve extensions of existing roadways and/or creation of new subdivisions with road access requirements being dictated by the orientation and size of the development lots. The costs of additional roads is not accounted for in the return on investment analysis, as the scale of new industrial subdivisions and the requirement for new roadways is unknown. This can be incorporated at a later date using the ROI Calculator tool.

8.11.5 Property Tax Revenues versus Infrastructure Costs

The estimated potential incremental property tax value (over a 50-year horizon) is based on the 42 net hectares of land demand that is forecast to be absorbed, guided by industrial-type employment growth through 2046. This potential incremental property tax value is estimated to be \$48.8 million. This figure must be compared against the new/upgraded infrastructure capital, operating, and lifecycle costs (total costs) associated with servicing industrial lands in order to enable development to occur. The servicing costs for each of the industrial areas varies depending on the scope and scale of servicing that is required, as well as the amount of land to be serviced.

The comparison of revenues to costs presented earlier reveals that there is a positive return on investment (except in the case of Fielding Road/Duhamel Road, where total costs over a 50-year horizon slightly exceed the potential incremental property tax value over the same time period). However, if a decision is made to service multiple industrial areas, the revenues are fixed (\$48.8 million), while the costs increase according to the extent of industrial areas serviced.

The land demand modeling indicates a requirement for 42 net hectares. To the extent that additional lands are serviced, it is anticipated that these lands would not be absorbed prior to 2046, and would represent an over-investment in capital, which would be under-utilized (and incur maintenance costs and eventual replacement costs without offsetting revenues in the form of development-related funds).

8.11.6 Infrastructure Investment Perspectives by Industrial Area

Optimally, the City of Greater Sudbury would feature serviced industrial lands in a range of locations to suit the varying preferences of users. The economic development benefits of servicing additional industrial lands through new/upgraded infrastructure must be balanced against municipal finance considerations, since the amount of lands which are forecast to be demanded over the 2046 horizon is guided by our industrial-type employment growth projection. Any over-servicing lands would lead to under-utilized infrastructure and affect the return on investment that can be achieved. The following presents area-specific comments that may inform future decision-making regarding infrastructure investments that are required to foster new industrial development across the city.

Fielding Road/Duhamel Road industrial area – There are 72.6 gross hectares of vacant industrial-designated land identified across this area, so it alone cannot fulfil the recommended provision of 125 gross hectares city-wide through the 2046 forecast horizon. Servicing lands in this location in the western part of the city, along with additional lands elsewhere, would accomplish the goal of offering a geographically diversified selection of development-ready properties to address the site selection preferences of various types of users.

Only two of the vacant industrial-designated properties in the Fielding Road/Duhamel Road area are greater than 10 hectares in size. Accordingly, it does not satisfy the objective of offering large sites that would be suited to land-extensive industrial operations. Rather, the majority of the vacant parcels which are in the range of 0.5 to 2.0 hectares would accommodate buildings in the range of 1,000-4,000 m² (at a benchmark 20% site coverage).

The extent of existing development along Fielding Road and environs demonstrates its appeal from an industrial user perspective – even in the absence of municipal water and wastewater infrastructure. The provision of such servicing would no doubt enhance its attractiveness, result in absorption of presently vacant lands, and likely also facilitate intensification on existing built sites over time. Although the ROI analysis indicates that the required infrastructure costs are not fully offset by potential incremental property tax values, it is important to note that intensification on existing built sites is not accounted for in our modeling.

Lasalle/Elisabella industrial area – Given the size of this industrial area – home to nearly 175 gross hectares of vacant industrial-designated lands, and additional occupied but under-utilized lands – it has more than the capacity to fulfil all of the city’s required land supply through the 2046 forecast horizon. Lasalle/Elisabella is one of four large industrial areas on the city’s east side (along with Maley Drive, Kingsway, and Coniston) which feature vast undeveloped/under-developed industrial-designated lands that could support the city’s future land requirements through 2046.

Although the ROI analysis for Lasalle/Elisabella indicates a positive return of approximately \$14.7 million, this is lower than Maley Drive (\$29.3 million) and Kingsway (\$34.7 million) due to the substantially higher total costs of servicing, including capital costs of nearly \$20 million. Note that the costs of developing subdivided lots has not been accounted for in our modeling due to the uncertain nature of any future work.

National Street industrial area – On the north edge of Sudbury, National Street is home to a relatively modest 16 hectares of vacant, industrial-designated lands. Provision of new/upgraded municipal infrastructure to service this area would offer a site selection alternative to other areas in the city. However, its relative proximity to other much larger industrial areas (Lasalle/Elisabella and Maley Drive in particular) must be considered in allocating funds to promote economic development.

The ROI analysis for National Street identifies a positive return approaching \$10 million. This is based off of total costs estimated at \$11.5 million versus potential incremental property taxes valued at \$21.1 million. A decision to provide new/upgraded municipal services to the National Street industrial area would be a component of a broader city-wide strategy, since it only provides a small share of the recommended supply of lands required through the forecast horizon.

Maley Drive industrial area – The 300+ hectare Maley Drive industrial area was submitted to the Ontario Government by the City of Greater Sudbury under the Job Site Challenge partnership opportunity, with the Province seeking shovel-ready industrial sites to be used by advanced, large-scale manufacturers. Maley Drive, Lasalle/Elisabella, Kingsway, and Coniston all offer large land parcels to accommodate land-extensive development (and all are situated on the east side of Sudbury).

The total infrastructure costs associated with bringing the Maley Drive land to market total \$19.5 million – much less than the nearby Lasalle/Elisabella industrial area (\$34.1 million), resulting in a more favourable ROI. However, prior infrastructure investments made to support future growth in the Kingsway industrial area lead to a superior ROI for that area. Again, note that the costs of building-out and servicing subdivided lots has not been accounted for in our modeling due to the uncertain nature of any future development.

Coniston industrial area – The Coniston industrial area is located south of the Kingsway on the eastern periphery of Sudbury, and has a substantial inventory of vacant industrial-designated lands (approximately 115 gross hectares). The required new water infrastructure to enable build-out of this employment area (a new trunk watermain along Highway 17) is viewed as a medium to longer-term project for the municipality.

Due to the complexity and some uncertainty regarding inputs to this analysis (such as assigning a proportionate share of the overall project costs to Coniston’s industrial lands), an ROI assessment for this area has not been provided. Such an analysis could be completed at a later date by City staff once the cost and timing of the trunk watermain become known, along with local servicing needs.

Kingsway industrial area – Home to the planned Kingsway Entertainment District, remaining industrial-designated lands in this area are estimated to be in the range of 125 hectares. Kingsway is one of four large industrial areas on the city’s east side (along with Lasalle/Elisabella, Maley Drive, and Coniston), each of which on its own has a sufficient land supply to address the city’s full requirements through 2046.

With regard to Kingsway Industrial Park sewer and water enhancements, in 2007, City Council authorized a Section 391 recovery charge and approved by-law #2007-54F to recover growth-related costs from benefitting landowners, over a 20 year period, plus interest. It was estimated that \$3.8 million of growth-related capital cost would be incurred from 2007 to 2019 and remain in progress until completion. As of year-end 2021, the City had spent \$3,720,885, of which \$2,490,773 is to be recovered from future Section 391 charges. City Council approved internal borrowing from the Capital fund, so annual contributions are made to reduce this debit balance. There were no Section 391 Charges collected from 2013 to 2020; in 2021, \$50,747 of Section 391 Charges were collected.⁷ Prospective Section 391 collections associated with potential future development that occurs in the Kingsway industrial area are not accounted for in the ROI analysis this represents funds that offset historic capital expenditures made by the City. This ensures a consistent approach to the ROI assessment across all of the areas under consideration across the city.

The necessary water and wastewater infrastructure is already in place to facilitate development of this area. This generates a strong positive ROI relative to other industrial areas that require significant capital expenditures to put in place the required new/upgraded services. However, it must be noted that the costs of building out and servicing subdivided lots in Kingsway has not been accounted for in our modeling.

Ceasar Road industrial area – The Ceasar Road industrial area has the required municipal infrastructure in place to facilitate development of its remaining vacant employment lands. At just 0.6 hectares of undeveloped land, it represents only a very small component of the required lands through the 2046 horizon of this analysis.

Valley East industrial area – Featuring 19 hectares of vacant land (roughly a one-quarter share of its total inventory of industrial-designated lands), the Valley East industrial area has the capacity to accommodate a modest component of the city's required industrial land demand over the coming decades. Notably, the vast majority of land parcels are small (0.25-0.75 hectares), so these lots would cater to smaller users.

From a site selection perspective, bringing to market additional serviced lands in the north part of the city would be advantageous. The ROI analysis indicates a favourable return of \$16.3 million, based on total costs (over 50 years) of \$7.6 million versus a potential incremental property tax value of \$23.9 million.

⁷ Source: 2021 Section 391 Charges as of December 31, 2021. Presented to Finance and Administration Committee, City of Greater Sudbury.

9.0 STRATEGIC RECOMMENDATIONS

9.1 Introduction

As articulated at the outset of this report, this project’s main goals are as follows:

- To improve the city’s economic competitiveness and encourage the development of employment land;
- To ensure that the Employment Land Strategy, policies, and incentives, support projected economic growth and development; and,
- To maintain an employment land inventory by applying a planning methodology that promotes the provision of an appropriate land supply.

The following sections draw upon the analysis undertaken in earlier sections of this report, which culminate in the guidance presented below. The Consultant Team is confident that these analysis and strategic recommendations will help position the City to attract future growth and to seize opportunities for employment land development.

9.1 Land Use Planning

The following section provides a series of strategic recommendations and planning policy guidance that is organized by theme. As well, the Consultant Team has provided an indication of the related timing for each recommendation.

OVERALL EMPLOYMENT LAND SUPPLY	
<p>At an aggregate level, the city has a more than adequate supply of vacant and underdeveloped Industrial and Commercial-designated land to meet anticipated demand through the 2046 forecast horizon. Importantly, this Employment Land Strategy provides key recommendations to ensure that an appropriate supply of investment-ready employment lands are provided to attract development and job growth over time, addressing issues such as land ownership, site selection, and servicing.</p> <p>While there is no vacant Institutional-designated land remaining, the major post-secondary educational institutions all have ample on-campus areas to accommodate growth. However, Health Sciences North faces a challenge at its landlocked Ramsey Lake site that must be addressed to support anticipated needs.</p> <p>There is no identified need for the City to directly intervene in the market through large-scale land acquisition to support economic development opportunities. There may be opportunities over time – on a case-by-case basis – for the City to acquire or divest employment land in order to facilitate efficient land use planning and to promote economic development.</p>	
Recommendation	<p>There is no need for significant intervention to amend the City’s in-place land use framework. The available employment land supply and associated planning policies are generally well positioned to address the anticipated demand over the horizon to 2046. It is not necessary to convert any non-employment land to an employment use. However, there is some recommended fine-tuning that is identified later in this section of the report which will enable the City to be responsive to opportunities that arise over time to ensure that the right employment lands are available in the right locations, with the required infrastructure servicing in place.</p>

	<p>Given the range and distribution of available lands (both vacant and underutilized), there is no identified present need for the City to directly intervene in the land market in a significant way, in the form of acquiring lands, or assembling development parcels. The quantum of lands projected to be absorbed through 2046 can be managed across the existing inventory. Notwithstanding this overarching sentiment, there may be opportunities on a case-by-case basis where municipal land acquisition/disposition may be a supportable course of action to facilitate the efficient use of lands and existing infrastructure, as well as to promote economic development.</p> <p>Among the risks inherent in the City itself purchasing additional employment land is that it would acquire sites that are not in a location that is demanded by occupiers; that demand is slow to emerge, and the holding cost/opportunity cost becomes a burden; and that it exacerbates friction between the City and established development land market participants. Instead, other planning tools and incentives are favoured by the Consultant Team to promote the uptake of employment lands to foster economic growth, and which offer the City more flexibility in its approach to growth management.</p>
Time Horizon	Not applicable.

INDUSTRIAL

The city has a suitable amount of Industrial-designated lands in a variety of locations to suit occupier needs.

Recommendation	<p>The Consultant Team’s employment by industry projections result in a recommendation to plan for the provision of 100 net hectares of industrial land through 2046. Therefore, the inventory of 830 gross hectares of vacant Industrial-designated lands city-wide represents a dramatic surplus. Available Industrial-designated lands situated throughout Sudbury, Garson, Lively, Coniston, and other geographies across the city provide a range of site selection options for prospective occupiers.</p> <p>From an economic development perspective, it is important to ensure that the various land use designations are in the correct locations, fundamentally tied to their own locational and access requirements. While it is impossible to predict the precise locations of growth, we are confident that the city offers a suitable range of choice, size, and location to capitalize on opportunities over time.</p> <p>From a zoning and site selection perspective, there is a limited amount of vacant M3-designated land (Heavy Industrial) remaining (two sites totaling 49 hectares situated east of the Lasalle/Elisabella area). City staff have stated that there is a perceived shortage of heavy industrial-designated sites province-wide – a sentiment expressed by industry participants. Although existing developed/underdeveloped sites may attract additional jobs in the future to mitigate the need for additional M3 lands, opportunities may emerge for businesses to situate new facilities in Greater Sudbury. Providing large, shovel-ready sites creates the right environment to attract such heavy industrial investment, and the accompanying jobs and economic benefits. While the Consultant Team does not believe it is necessary to preemptively zone additional lands as M3 at this time, consideration should be given to all rezoning applications to allow additional M3 lands where such development is compatible with adjacent land uses. Proactively, City staff could review existing M1 and M2-designated lands to identify those that may be best suited to M3-type uses.</p>
Time Horizon	Not applicable.

There may be opportunities for industrial land conversion in select locations to facilitate sought-after development.	
Recommendation	<p>The Consultant Team does not foresee pressure for land use conversion for the majority of the city’s vast supply of vacant Industrial-designated lands. However, the significant amount of industrial land can certainly withstand some conversion for other uses – including residential development, retail and service commercial uses, and office uses – in select locations that can appropriately buffer the in-place industrial activities. However, there is no need to proactively redesignate these lands; rather, the private sector is likely to initiate such actions, to which City staff can be responsive.</p> <p>In terms of addressing the question “<i>how much conversion can be accommodated within the current supply?</i>”, the City must maintain a 20-year supply of industrial lands, and should continue to promote a range of locations, site sizes, zoning, and serviced or readily-serviceable sites for employment land development. The earlier land demand analysis recommended maintaining a supply of 100 net hectares of industrial lands to accomplish these objectives. Any conversion requests should be evaluated with these factors in mind.</p>
Time Horizon	Over the full horizon of this strategy (through 2046).

The City may wish to explore a mechanism to facilitate expansions to the existing Settlement Area boundary for industrial uses in key locations where demand has historically been observed, where existing infrastructure can be leveraged, and where motivated landowners are eager to pursue near-term development opportunities.	
Recommendation	<p>As has been stated repeatedly, the City of Greater Sudbury has a significant surplus of designated employment land. The City must plan for a breadth of opportunities in a number of locations with varying levels of site sizes and servicing to provide a maximum range of site selection for prospective users. The dispersed nature of the city means that land servicing is a challenge – bringing the needed utilities and transportation infrastructure to facilitate new development. The City needs to encourage development where existing infrastructure capacity remains. Aligned with this approach, strategically bringing on new lands that are located in areas where demand has historically been observed, where existing infrastructure can be leveraged, and where motivated landowners are eager to pursue near-term development opportunities should be encouraged.</p> <p>Various landowners have expressed interest in having lands brought within the City’s Settlement Area boundary for the purposes of pursuing employment land development. These applications should be evaluated individually against the overall recommendations contained in this Employment Land Strategy.</p> <p>The expansion of a Settlement Area is an important element of land use planning in Ontario that is given specific attention in the <i>Provincial Policy Statement</i>. Fundamentally, expanding a Settlement Area boundary is required to be justified through an analysis of need (supply and demand) for the proposed expansion.</p> <p>Based on the work carried out in this Employment Land Strategy, that justification of need would be very difficult to establish based on the substantial supply of designated industrial lands identified throughout the city. However, that land supply is not all contextually or functionally equal in terms of location and the ability to provide efficient and cost-effective municipal infrastructure. Therefore, it is recommended that the City establish a planning policy regime that supports the consideration of Settlement Area boundary expansion for industrial uses where there is an offsetting removal of some other industrial lands from within the Settlement Area elsewhere in the city. The principle here is “no net increase” in industrial land area within the Settlement Area of the city, with the objective of maximizing the City’s ability to establish a more effective/attractive supply of industrial land in appropriate locations.</p>

Lands which would potentially be appropriate for consideration for removal from the Settlement Area, or determined to be excess lands, include those on the periphery of the city's settlement boundary which are presently unserved, and which are far removed from recent/active development locations (i.e., those which do not represent any realistic prospect for development for the foreseeable future).

The following is a policy approach that would facilitate the consideration of Settlement Area boundary expansions, as outlined above:

- "a) In considering implementing a program where a proposal to add an "employment area" into a "settlement area", with the expectation that an "employment area" within the existing "settlement area" will be redesignated to "excess lands", or removed from the "settlement area", an Official Plan Amendment is required, subject to the following criteria, to be achieved to the satisfaction of the municipality:*
- i. There would be "no net increase" in land within the municipality's "settlement area";*
 - ii. The adjustment would support the municipality's ability to meet stated economic development objectives established in the Official Plan;*
 - iii. The adjustment would add to the land supply in an identified "priority employment area" within the municipality;*
 - iv. The adjustment would not create or exacerbate any "adverse effect" related to any "sensitive land use" in the vicinity;*
 - v. The "settlement area" to which lands would be added can be appropriately serviced with municipal water and wastewater in an efficient and cost-effective manner, and there is sufficient reserve infrastructure capacity to service the lands; and,*
 - vi. There is appropriate compensation to the landowner whose property has been redesignated to "excess lands", or removed from the "settlement area" in the Official Plan. Where the City is the affected landowner, it may consider the provision of community benefits as compensation.*
- b) Where the gross land area proposed to be included within a "settlement area" is 40 hectares or greater, then the implementing Official Plan Amendment shall be supported by a "municipal comprehensive review".*
- c) Where the gross land area proposed to be included within a "settlement area" is less than 40 hectares, the implementing Official Plan Amendment may proceed without the need for a "comprehensive review", subject to a planning justification identifying that, in addition to the criteria identified in a) above, sufficient opportunities to accommodate employment growth and to satisfy market demand are not available within the existing "settlement area" to accommodate the projected needs of the municipality over the identified planning horizon of the Official Plan, to the satisfaction of the municipality."*

In consideration of this approach, a number of key definitions are necessary to fully understand the concepts inherent to it. Most of the definitions are found within the *Provincial Policy Statement (PPS)*, but a number are not found within the *PPS*, or within the *Growth Plan for Northern Ontario*. As such, definitions are established below for consideration:

- a) The concept of "Excess Lands" is not defined in the *PPS*, nor the *Growth Plan for Northern Ontario*. It is, however, identified by the Province in the *Growth Plan for the Greater Golden Horseshoe*, as follows:

"Excess lands are vacant, unbuilt but developable lands within settlement areas but outside of delineated built-up areas that have been designated in an Official Plan for development but are in excess of what is needed to accommodate forecasted growth to the horizon of this Plan."

	<p>b) The concept of "No Net Increase" is not defined in the <i>PPS</i>, nor or the <i>Growth Plan for Northern Ontario</i>. For the purposes of this recommendation, the following definition is suggested:</p> <p style="text-align: center;"><i>"No net increase means that where land is to be redesignated in the Official Plan to be within a settlement area for employment uses, an approximately equal area within an existing settlement area shall be either removed from the settlement area, or identified as excess lands within an existing settlement area."</i></p> <p>c) The concept of a "Priority Employment Area" is not defined anywhere in Provincial policy, but is a concept to be considered for implementation and definition as part of this exercise. For the purposes of this discussion:</p> <p style="text-align: center;"><i>"Priority employment area means an area defined by the municipality for the purpose of long-term planning for job creation and economic development. A priority employment area is a location where the municipality has made strategic infrastructure and servicing investments to foster growth in support of the municipality's economic development objectives as defined in the Official Plan."</i></p>
Time Horizon	Immediate (within the next 12 months), and over the full horizon of this strategy (through 2046).

No changes to the Official Plan are suggested for the General Industrial or Heavy Industrial designations. The existing Industrial land use designations suitably identify a land supply that is available to accommodate multiple forms of industrial development, as well as complementary land uses.

Recommendation	<p>Overall, it is anticipated that the existing supply of lands within the General Industrial and Heavy Industrial designations is sufficient to accommodate the long-term needs of this sector of the economy. The Official Plan does not include significant policy frameworks that would unduly restrict the use of these lands for the purposes that they have been planned for – except that expansions to existing heavy industrial uses within the Heavy Industrial designation will be facilitated through a Zoning By-law Amendment. In general, these land use designations are not considered to be restrictive, but rather identify a land supply that is available to accommodate multiple forms of industrial development, as well as complementary land uses. This is aligned with the intent of ensuring a range of options for prospective occupiers.</p>
Time Horizon	Not applicable.

Although existing Industrial zones are suited to define the range of activities that take place on these lands, a modest set of changes to the existing zoning should be considered by the City in order to further the economic development aspirations of the Official Plan.

Recommendation	<p>M1-1 and M1 – Notwithstanding the permissions for light industrial uses, these zones should be appropriately considered as part of the commercial hierarchy, and explored for a more mixed use role. Those zone categories permit an array of retail and service commercial uses, as well as office uses. The regulatory elements of these two zones are virtually identical, and generally promote a low-rise built form and surface parking. These zones have the potential to accommodate a significant array of new job creation, in line with the City's economic development objectives. It is recommended that the M1-1 and M1 Zones be combined and renamed to be included within the City's commercial hierarchy of zone categories. The mixture of uses suggested would not include residential uses, but rather a robust mixture of retail, service commercial, office, and light industrial uses. With appropriate attention to urban design, these uses are generally compatible with each other, and can be considered for mixing within a district, on a site, or within a building.</p>
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	<p>M2 – M2 is a very important zone category, as it can be expected to accommodate the more traditional industrial job types, including manufacturing and warehousing facilities. No changes are recommended for this zone.</p> <p>M3 – The M3 Zone is a heavy industrial zone, and incorporates a limited array of supporting uses. No changes are recommended for this zone.</p> <p>M4 and M5 – The M4 and M5 Zones are focused on resource opportunities – although lands identified as Mining/Mineral Reserve in the Official Plan are outside of the scope of this Employment Land Strategy. No changes are recommended for these zones.</p> <p>M6 – M6 is a municipal function that will react to need. No changes are recommended for this zone.</p>
Time Horizon	Immediate (within the next 12 months).

The City should implement a Community Improvement Plan (CIP) targeted at the industrial sector in order to foster growth and attract and retain business.

Recommendation	<p>The Consultant Team’s review of comparative markets reveals that Greater Sudbury is an outlier among large municipalities in Northern Ontario by not offering a Community Improvement Plan for industrial development. North Bay, Sault Ste. Marie, Thunder Bay, and Timmins all offer some level of financial incentives related to employment lands development.</p> <p>While the specifics of an industrial CIP are dependent upon the level of funding that is linked to such a program, the following offers the framework of a model CIP for City staff to explore (which could vary from project-to-project, based on pre-set criteria, and based on the scope of the development). City staff will design the specifics of the program, informed by practices in other municipalities (refer to the discussion of incentive programs within Appendix 4 – Comparative Markets Analysis).</p> <ul style="list-style-type: none"> - Location: The “Industrial Development CIP” would be city-wide. Targeted additional incentive levels could apply to a specific area(s) of the city (e.g., an area where the City was making/had made a significant investment in new infrastructure/services). - Eligible development: New industrial construction, as well as industrial building additions/expansion or renovations that meet minimum criteria to be determined (such as building permit value, floor area, and/or new jobs created). - Program elements: <ol style="list-style-type: none"> (1) Municipal fee rebates – including building permits, development charges, parkland dedication/cash-in-lieu, and other planning or engineering-related fees (deposits, inspections, etc.). (2) Tax Increment Financing – Phase-in of full property tax amount over a specified time frame. The time horizon could be tiered based on pre-set criteria, such as project size. - Funding source: The municipal fee rebates would be fees that are no longer collected, which affects the operating budgets of impacted departments. The Tax Increment Financing would be a reserve fund created to offset some of the cost of new industrial development, and impact property tax collections over a period of time. <p>Once depleted, the TIF program would be reviewed to understand its impacts/outcomes.</p>
Time Horizon	Immediate (within the next 12 months).

OFFICE

The emerging consensus is that office work in the future (post-COVID-19) will be a blend of work-from-home/flexible work and in-the-office settings. Despite an increase in the scale and frequency of work-from-home, future office land needs are likely to emerge in the Downtown, within Mixed Use Commercial areas, and may be a feature of redevelopment that occurs in Regional Centres.

<p>Recommendation</p>	<p>Greater Sudbury’s office space is clustered in Downtown Sudbury, as well as dispersed sites elsewhere across the city. Unlike many metropolitan areas, there is no dedicated suburban-style office business park. In the future, office occupiers will continue to seek space Downtown to take advantage of nearby amenities and proximity to clients. New office space will also emerge in Mixed Use Commercial areas and may be a feature of mixed use redevelopment that occurs in Regional Centres. Appropriate land use planning controls are already in place to address future demand as it occurs. As demand for office space recovers post-pandemic, City staff should remain responsive to inquiries for new office development, including within mixed use projects, to encourage this higher density employment land function.</p> <p>While the extent of the post-pandemic impact on office demand is still uncertain, in a worst-case scenario, excessive vacant office space could become problematic in the Downtown. Market dynamics will need to be monitored over time in order to identify potential alternative uses that could be accommodated within underutilized office premises, such as conversion to residential or hotel uses. It is necessary to ensure that planning policy facilitates such as transition, potentially aligned with incentives to help effect the desired outcomes.</p>
<p>Time Horizon</p>	<p>Short-term (2-5 years) to Medium-term (6-10 years).</p>

RETAIL-COMMERCIAL

There will be ongoing need for development sites for retail-commercial properties. Conversion of employment lands to a commercial use can be explored, while ensuring sufficient needed industrial lands remain available for that use.

<p>Recommendation</p>	<p>The results of the land needs projection indicates that the City should plan for demand for approximately 20 net hectares of retail-commercial land through 2046. This quantum of land will provide for site selection flexibility, and will likely primarily be lands in new growth areas to accommodate small freestanding properties, strip plazas, and neighbourhood-scale retail demand as the city’s population expands – although infill sites may also be sought-after among retail-commercial developers. As well, sites to accommodate any larger-scale development that may arise will be needed, as Greater Sudbury serves as a regional service centre. The rate of new retail construction will slow compared to past performance – and paradoxically, new supply will come on stream as other existing properties continue to struggle.</p> <p>Given the significant transition occurring in the retail market, with store closures increasing and the pace of e-commerce spending accelerating, the Consultant Team is reluctant to identify specific new large, vacant sites that may be well suited to accommodate commercial development. It may be the case that new market entrants are able to find suitable locations across the existing built environment in properties that become vacated, or on remaining underutilized lands. To the extent that developer interest is identified on lands elsewhere in the city, land use conversion requests should be evaluated on a case-by-case basis. Given the rapidly evolving retail-commercial landscape, it is the Consultant Team’s recommendation that this reactive and flexible approach is preferred, in allowing market participants to guide site selection preferences – rather than the City trying to anticipate occupier needs. Entertaining applications for Official Plan and Zoning By-law amendments to allow retail-commercial uses in areas where they are not currently permitted is supportable, given the conclusions of this Employment Land Strategy that the overall employment land supply is more than sufficient to accommodate anticipated growth through the forecast horizon.</p>
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	<p>It is appropriate for City staff to consider the merits of applications for the conversion of employment lands to a commercial use (particularly since the Consultant Team has concluded that there is an excess supply of Industrial-designated lands in the city). This issue will require ongoing monitoring by City staff to ensure a suitable supply of designated sites in a range of locations remains available to accommodate anticipated growth, and to respond to important retail opportunities as they may arise from time to time. To consider an application "supportable", the City should focus on the concept of compatible development – which is already a key consideration in staff's review of applications for development. Part of the consideration is the impact of the proposed use on existing development patterns and uses, including consideration of the impacts on the ongoing operation of existing industrial land uses in proximity.</p> <p>From a retail-commercial perspective, if an occupier is seeking a location to open or relocate a business, they may be willing to consider a site just beyond the periphery of a municipality, for reasons including land/building cost, development timing, or other factors. Accordingly, it is critical that a municipality plan and designate a sufficient amount of commercial lands to satisfy prospective demand, as well as be responsive to inquiries for employment land development/conversion. With this approach to planning, the competitive advantage of an agglomeration of commercial activities can be reinforced, and inhibit potential outflow of opportunities to nearby jurisdictions.</p>
Time Horizon	Over the full horizon of this strategy (through 2046).

There is potential for existing retail-commercial sites to be repurposed.

Recommendation	<p>The outlook for Greater Sudbury (as with many other urban areas) is a likely decline in the amount of physical shopping centre space per capita over time, along with the closure of under-performing store locations. As with many mature metropolitan areas, it is highly likely that some shopping centres/buildings within the existing inventory will become obsolete (due to their format, orientation, age, or other factors). If retail vacancy becomes problematic, the remaining tenants at a shopping centre may gradually relocate to better-performing shopping centres, or standalone sites, as their leases expire. In the future, there may be an opportunity to transform some of these distressed assets into mixed use redevelopment sites combining retail-commercial space with other uses, including residential (it is recognized that the C2 Zone already permits residential land uses). While this will not dramatically reduce the need for new greenfield development in the city, it may present some opportunities to capitalize on centrally situated sites for medium and higher density built forms.</p> <p>From a planning policy perspective, the Consultant Team recognizes and supports the work already done by City staff to promote the introduction of some medium and high density residential uses into the Commercial Shopping Centre (C5) Zone, as well as the Nodes and Corridors work that has been completed. Further, the City's planning work (Official Plan Amendment and Zoning By-law Amendment) on LaSalle Boulevard is an appropriate approach to mixed use planning in that context. A similar approach may be warranted on other arterial corridors throughout the city where the C2 Zone predominates.</p> <p>To augment the City's work within the C5 Zone, it is suggested that City staff be receptive to proposals for all types of medium and higher density residential development within the C5 Zone to promote those sites for more robust mixed use redevelopment. It is also important that redevelopment schemes include retention of some or all of the retail gross floor area, to ensure that the surrounding community does not lose a key retail-commercial asset. Further, where the introduction of medium and higher density residential uses is proposed within a C5 Zone, it is important to ensure the creation of an appropriate residential context including public open space and community facilities (as appropriate to the scale of the development), as well as the compatibility of the proposed residential uses with surrounding environment.</p>
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	Some high-growth, urban municipalities are embracing the opportunity to transform under-performing retail-commercial properties into redeveloped, mixed use sites with a range of uses and densities. Greater Sudbury’s anticipated growth trajectory makes such opportunities more limited in scope and scale – although they should be promoted.
Time Horizon	Over the full horizon of this strategy (through 2046).

The Regional Centres have significant potential to contribute to future employment in Greater Sudbury. These locations should be encouraged to develop as mixed use places. A “vision” for these Centres should guide future planning efforts, in collaboration with property owners.

Recommendation	<p>Greater Sudbury’s Regional Centres are well located, with good access to the primary road network, and typically are well served by transit. While these sites have historically generated significant jobs in the retail and service commercial sector, there is an opportunity to enhance their economic role within the city. Certainly, given the scale of the property required to accommodate a shopping centre and associated parking, there is the opportunity to permit standalone office buildings on site, at significant building heights – up to a maximum of 34 metres, similar to the C4 Zone.</p> <p>City staff should collaborate with property owners in the identified Regional Centres to develop a “vision” for each of these sites for the near and longer-term. It is likely that the function of these places will continue to evolve, and their central locations and large land areas offer a broad range of opportunity for change over time – guided by the motivations and investment interests of property owners (and associated timelines).</p> <p>Planning policy – in the Official Plan and in the implementing zoning – must be aligned with these visions in order to set the stage for change as market conditions evolve. A key redevelopment principle of "establishing the environment for change" is all about creating a vision for the future. Each of the Regional Centres have a different context, and will need to establish its own community-appropriate concept for the future – the desired mix of land uses, public realm enhancements, internal road pattern, and built form characteristics (massing, density, and height). The vision should be articulated and codified through an Official Plan Amendment/Secondary Plan, and should focus on promoting these regional shopping centre sites as higher density, mixed use communities with places to live, to work, and to shop in proximity. In terms of the elements to be considered within the OPA/Secondary Plan process, the following is recommended:</p> <p><i>"The City shall require, prior to the submission of any development application, that an Official Plan Amendment/Secondary Plan be prepared for the whole of the applicable Regional Centre Area. The purpose of the Official Plan Amendment/Secondary Plan is to promote comprehensive planning, and to:</i></p> <ul style="list-style-type: none"> <i>a) Identify the overarching vision for the area, including a set of development principles;</i> <i>b) Identify the detailed land use and density distribution;</i> <i>c) Identify the Parks & Open Space, community facilities, and the active transportation network;</i> <i>d) Identify the detailed road pattern, including Local Roads;</i> <i>e) Articulate details for the provision of water, wastewater, and stormwater management systems in a Comprehensive Servicing Strategy Report;</i> <i>f) Identify network and system connections to properties adjacent to the Area;</i> <i>g) Form the basis of an implementing Zoning By-law Amendment; and,</i> <i>h) Form the basis for a Developer’s Group Agreement, where the Area includes multiple landowners."</i>
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	<p>A second key redevelopment principle is to "reduce the risk of the approval process". This can be achieved through a pre-zoning process that is developed and approved concurrent to the OPA/Secondary Plan process. Pre-zoning is intended to get zoning approvals in place comprehensively (and at one time) for the entire Regional Centre, rather than dealing with zoning applications incrementally, on a site-specific basis. Pre-zoning implements the OPA/Secondary Plan.</p> <p>In addition to the introduction of residential land uses, the City should consider supporting the Regional Centres as key accommodators for a broad range of employment-generating land uses, including consideration of the third key redevelopment principle: "reduce the cost of redevelopment". This can be achieved by establishing a set of planning policy-related incentives (already identified for application within the Downtown), including:</p> <ul style="list-style-type: none"> - New development be exempt from density and maximum height limits; and, - New non-residential development be exempt from parking, or reduced parking requirements, as appropriate. <p>The City could also consider additional financial incentives established through a Community Improvement Plan, and/or waiving or reducing development application fees, development charges, and parkland dedication/cash-in-lieu of parkland.</p>
Time Horizon	<p>"Visioning" exercise between City staff and property owners: Short-term (2-5 years). Execution of recommendation: Over the full horizon of this strategy (through 2046).</p>

As an amalgamated municipality, Greater Sudbury has multiple downtowns. The Town Centres designation recognizes that there is a distinct character in place across the existing and historic commercial centres throughout the municipality.

Recommendation	<p>The Consultant Team supports City staff's ongoing work on Nodes and Corridors throughout Greater Sudbury and as such, does not offer specific planning recommendations with respect to amending the present Town Centres designation. However, we suggest that any future applications for employment land conversion within Town Centres be carefully considered in order to ensure a suitable range of opportunities exists for ongoing commercial and employment uses across the municipality, and to ensure that the day-to-day shopping and services needs of residents can be met locally.</p>
Time Horizon	<p>Over the full horizon of this strategy (through 2046).</p>

A set of changes to the existing zoning should be considered by the City in order to further the economic development aspirations of the Official Plan.

Recommendation	<p>M1-1 and M1 – As noted earlier, it is recommended that the M1-1 and M1 Zones be combined and renamed to be included within the City's commercial hierarchy of zone categories.</p> <p>C2 Zone – This zone is very permissive in terms of land use, and could be adjusted to accommodate more urban built-forms by enhancing the lot coverage permission up to 65%, and by changing the height limit to something that would be determined through an assessment of impact on adjacent land uses and establishing an appropriate transition to adjacent, more sensitive land uses. These adjustments would enhance the potential of this zone category to accommodate a more significant component of the new job projections over the forecast horizon.</p>
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	<p>C4 Zone – This zone is relatively common for suburban office development areas. Lot coverage and building height work together to promote a mid-rise built form served by surface parking lots. Consideration to adjusting the residential building height up to a maximum of 34 metres, to match the permitted office building height, would seem logical. This zone category will play a significant role in accommodating the array of new jobs that the city needs to attract and accommodate, in line with the aspirations of the Official Plan.</p> <p>C5 Zone – In accordance with previous recommendations related to the Regional Centres (C5 Zone), this zone presents an opportunity to accommodate a whole new range of economic opportunities, as the role of these regional-scale shopping centres/nodes evolves into the future.</p> <p>Overall – The City has seven Commercial Zones (C1-C7), as well as two Industrial Zones (M1-1 and M1) which have commercial elements. It would be beneficial to reduce/streamline the number of zones in order to facilitate the repurposing of established premises to new uses. This would reduce the time required for landlords and prospective occupiers to re-tenant a vacant premises.</p>
Time Horizon	Immediate (within the next 12 months).

INSTITUTIONAL AREAS

It is essential that City staff collaborate with major institutions to meet their ongoing land requirements in order to foster employment growth. While the city’s university and colleges have an ample land supply, Health Sciences North faces a pressing need for expansion at its landlocked Ramsey Lake site.

Recommendation	<p>The Official Plan does not provide any significant planning policy regulations that either promotes or restricts the ongoing development of the key Institutional Areas, which is a positive approach. However, keeping in mind the important role that these major institutional partners are expected to play in accommodating and attracting the economic drivers of the future of the City of Greater Sudbury, the Official Plan could provide more supportive policies aimed at promoting ongoing expansion, the attraction of new and more diverse institutions, and including a commitment to work with these institutions to ensure their ongoing success (and growth).</p> <p>The Consultant Team engaged with major local institutions including Laurentian University, Cambrian College, Collège Boréal, and Health Sciences North. The three large post-secondary education campuses all offer excess lands that can accommodate future development, and on-site intensification is the principal focus of their growth (as opposed to seeking off-campus options). In stark contrast, Health Sciences North expresses a need for expansion at its landlocked Ramsey Lake site. Liaison with key local institutions on the part of City staff will be necessary to plan for institutional land needs going forward, such as developing solutions to relocate non-essential services from the Ramsey Lake site to other locations within the community.</p>
Time Horizon	Addressing Health Sciences North’s needs at Ramsey Lake: Immediate (within the next 12 months) to Short-term (2-5 years). Liaising with major institutions: Over the full horizon of this strategy (through 2046).

No changes to the Institutional zone are suggested.	
Recommendation	Future increases in employment in the institutional segment will be closely linked with the city's and broader region's population growth over time. Accordingly, it is possible to proactively plan for the land requirements of institutional users, in order to ensure an appropriate supply of lands – including expansion/densification at existing sites, and potentially acquisition of new sites for development. At this time, there is no identified need to permit Institutional uses in more places throughout the city.
Time Horizon	Over the full horizon of this strategy (through 2046).

DOWNTOWN SUDBURY

The City's Downtown Master Plan remains the guiding document directing the evolution of the area. The City could consider a more aggressive approach to fostering new downtown employment land development/revitalization by continuing to foster the environment for change, reducing development costs, and reducing the risk of the development approval process.

Recommendation	<p>The City of Greater Sudbury has put in place a framework to support the continued evolution of its Downtown. Prepared in 2012, the City's Downtown Master Plan guides the future of the area. Its objectives are to grow employment, create destination attractions, and make the Downtown a centre for learning and living. The Vision presented in the Master Plan anticipates incremental, long-term change across much of the Downtown. The Action Strategy addresses phasing and funding; Policy Directions articulate the policy regime; and a set of Priority Capital Projects are identified (including suggested phasing; the project lead and potential partners; potential funding; and needed policy updates).</p> <p>The Downtown Community Improvement Plan includes grants and loans to reduce the cost of development and redevelopment in Downtown Sudbury, and the City's Brownfields Strategy and Community Improvement Plan is applicable for urban brownfields (vacant commercial and industrial properties).</p> <p>The planning policy regime identified in the Official Plan for Downtown Sudbury is appropriately flexible and clearly establishes the importance and primacy of its role as the centre of the city. However, in a very broad sense, the City could consider a more aggressive approach to revitalization and new development through the following three lenses:</p> <ol style="list-style-type: none"> (1) Establish the environment for change – This lens is about establishing a clear vision for the Downtown, which has already been done and is articulated in the Official Plan and Downtown Master Plan. However, that vision requires long-term political will to achieve success, and needs strong support and champions for change throughout the City's administration. Another key element is to ensure that municipal infrastructure and public service facilities are in place in advance of development applications, in anticipation of change. Downtown revitalization is never complete; it is a constant evolution.
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	<p>(2) Reduce the cost of development – This lens focuses on the fact that downtown redevelopment is often more time consuming and more challenging than typical greenfield development opportunities. The City has already implemented incentives in the Official Plan through parking exemptions and permissive height regulations throughout the Downtown. As well, the Downtown Community Improvement Plan (CIP) features six financial incentive programs to help stimulate development and redevelopment, including: Tax Increment Equivalent Grant Program; Façade Improvement Program; Planning and Building Fee Rebate Program; Residential Incentive Program (per-door grant); Feasibility Grant Program; and Downtown Sudbury Multi-Residential Interest-Free Loan Program. The City should monitor uptake of these CIP programs and adjust/amend them as required. The Downtown area is exempt from development charges. The City could consider additional development incentives aimed at reducing the cost of new development (additional incentive programs established through the Community Improvement Plan, and/or waiving or reducing development application fees, parkland dedication/cash-in-lieu of parkland, etc.).</p> <p>(3) Reduce the risk of the development approval process – This lens recognizes that risk is a key factor in any decision to develop in a downtown context. A number of challenges related to demolition, potential site contamination, and development approvals can be daunting – both time consuming and expensive. The City could work toward an expedited planning approval regime that reduces the risk and timing of the development approvals process. A key approach for consideration is for the City to pre-zone the Downtown (or key sites within the Downtown) for significant redevelopment potential.</p>
Time Horizon	Immediate (within the next 12 months) to Short-term (2-5 years).

RURAL AREAS

No changes to the Rural Area designation are suggested.

Recommendation	While the Rural Area is expected to accommodate appropriate rural commercial/industrial land uses, it is not expected to be a major contributor to the economic growth of the City of Greater Sudbury (most of the new economic opportunities will be focused on the serviced Settlement Areas, with a particular emphasis on the former City of Sudbury). Nonetheless, the introduction of policy changes to support on-farm diversified employment uses may be considered appropriate, as the nature of agricultural uses and agri-business evolve.
Time Horizon	Not applicable.

MINING/MINERAL RESERVE

No changes to the Mining/Mineral Reserve designation are suggested.

Recommendation	It is expected that the ongoing protection of resources through the appropriate application of the Mining/Mineral Reserve designation is key to the preservation of this crucial component of the city's historic, existing, and future economy.
Time Horizon	Not applicable.

AGGREGATE RESERVE

No changes to the Aggregate Reserve designation are suggested.

Recommendation	It is recognized that these important resources require the protection of the policies of the Official Plan.
Time Horizon	Not applicable.

KINGSWAY ENTERTAINMENT DISTRICT

Kingsway Entertainment District (KED) plans remain in effect.

Recommendation	<p>In a decision dated December 23, 2020 regarding Case No. PL180494, the Local Planning Appeal Tribunal (LPAT) ordered that all of the Appeals under s. 17(24) and 34(19) of the Planning Act are dismissed. Accordingly, the Council-approved site-specific amendment to the City’s Official Plan, and certain site-specific amendments to the City’s comprehensive Zoning By-law No. 2010-100Z to permit a development that would include a place of amusement in the form of a casino, as well as an arena and a parking facility, remain in effect.</p> <p>Work on this Employment Land Strategy commenced in summer 2020 – prior to the LPAT decision. Accordingly, the Consultant Team structured its approach to the work program to ensure that the analysis and recommendations would not be impacted by the outcome of this decision. Should the KED ultimately proceed as planned, it would likely have the effect of attracting complimentary land uses in the vicinity. Commercial and light industrial are examples of employment land uses that would be compatible in proximity to the KED development.</p> <p>Overall, the city has such a surplus supply of employment land that even a large-scale project such as the KED does not alter its capacity to meet land needs across a range of industries and a dispersed set of sites that are designated for employment uses.</p>
Time Horizon	Not applicable.

BROWNFIELDS

From a land needs perspective, the redevelopment of brownfield sites is not required to meet anticipated employment land demand.

Recommendation	<p>It is challenging to provide strategic guidance concerning Greater Sudbury’s brownfields, given that our supply and demand analysis indicates that there is no apparent market pressure for their redevelopment. The often high cost of remediation of brownfield sites impairs their redevelopment potential, although this may be mitigated by an attractive location that would generate market demand for redevelopment. This is an inherently risky endeavor – even in markets with higher land values and a pace of growth that is far more rapid than in Greater Sudbury.</p> <p>The City has a Brownfield Strategy and Community Improvement Plan in place that incorporates four programs to help reduce upfront costs associated with redevelopment of urban brownfields:</p> <ol style="list-style-type: none"> (1) Tax Assistance Program: Defers or cancels 100% of the municipal and education portion of the property tax (education portion subject to Minister of Finance approval) during the rehabilitation period and development period (up to 18 months). The amount of assistance provided under this program varies. (2) Landfill Tipping Fee Rebate Program: Reduces landfill tipping fees from \$72 to \$36 per metric tonne for impacted soil being removed from a brownfield, as long as it can be used at the City’s landfill site. The City will provide approximately \$200,000 in funding under this program annually. The total amount of funding provided to each property is \$40,000.
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	<p>(3) Planning and Building Permit Fee Rebate Program: Refunds all or part of planning and building permit fees in the redevelopment of a brownfield, after certain performance criteria are met. The City will provide approximately \$350,000 in funding under this program annually. The total amount of funding provided to each property will be \$70,000.</p> <p>(4) Tax Increment Equivalent Grant Program: Grants 100% of the incremental increase in the municipal portion of the property tax revenue associated with a project for a period of up to five years. The amount of assistance provided under this program varies.</p> <p>Among the challenges to brownfield projects in Greater Sudbury include the sometimes slow pace of occupier demand, and the ability to attract density, which can help mitigate the often high costs of redevelopment of such sites. The Consultant Team advises that City staff continue to monitor the extent of CIP uptake and adjust the programs offered as necessary over time. This could involve directing additional funds to priority programs that are in highest demand.</p> <p>From a municipal perspective, reasons to seek to reuse brownfields (and to support their redevelopment financially) include limiting urban sprawl, exhibiting environmental stewardship, and overall city-building. If viable from a land economics perspective, the private development market will lead the way on brownfield redevelopment in the city. The role of the City of Greater Sudbury in supporting such endeavours (beyond the current CIP) would vary depending on the size and complexities of the project, but may include extending/upgrading municipal infrastructure/services, accelerating planning approvals, or other approaches that would be evaluated at a future time, on a case-by-case basis.</p> <p>Since the time horizon for absorption/build-out is considered highly speculative, the Consultant Team does not advise that the City pursue acquisition of a brownfield site(s) to attempt to expedite the development process.</p>
Time Horizon	Over the full horizon of this strategy (through 2046).

9.2 Infrastructure and Servicing

The strategic recommendations provided below focus on the topic of infrastructure and servicing across the city’s employment lands. The Consultant Team has provided an indication of the related timing for each recommendation.

INFRASTRUCTURE INVESTMENT STRATEGY	
Additional water, wastewater, and utilities infrastructure is required to facilitate industrial land development through the 2046 forecast horizon.	
Recommendation	<p>The analysis of employment land supply city-wide identified an excess of industrial-designated lands to accommodate forecast demand through 2046. However, the status of land servicing and infrastructure capacity must also be considered. The Consultant Team’s assessment of water, wastewater, and utilities infrastructure identified the required investments to bring these lands to a shovel-ready state, or to add the required capacity to support growth. Drawing upon this information, the Consultant Team strategically examined the opportunities in each industrial area in order to provide guidance to City staff and Council to support future decision-making. These insights are informed by the amount of serviced lands required, the location of recent new industrial construction, considerations related to linear versus greenfield new development, and prospective property tax revenues versus infrastructure costs.</p>

	<p>The Kingsway and Ceasar Road industrial areas have the required infrastructure in place to accommodate new industrial development. Coniston has been excluded from our analysis due to the uncertainty regarding the timing and cost of infrastructure that is needed to enable growth. The remaining five industrial areas examined – Fielding Road/Duhamel Road, Lasalle/Elisabella, National Street, Maley Drive, and Valley East – have varying capital requirements and longer term operating and lifecycle costs.</p> <p>Some industrial areas would accommodate new development in a linear form along established roadways (e.g., National Street and Fielding Road), while other larger areas (e.g., Maley Drive and Kingsway) will require the future subdivision of lots to enable larger-scale development, as well as new roads. The cost of this creation of development lots and roadways is unknown and has not been accounted for in our analysis.</p> <p>From a utilities perspective, there is no apparent rationale to favour one area over another, in terms of accommodating future industrial land development.</p> <ul style="list-style-type: none"> - Hydro One has assumed that the City of Greater Sudbury will construct a new transformer station to supply the new industrial developments. Further, Hydro One has confirmed that new customer transformer stations will be required for all of the industrial sites. - Enbridge Gas Inc. provided high-level information on the existing gas line infrastructure within each industrial area. Enbridge has noted that without knowing specific hourly load and delivery pressure requirements, they were not able to provide an assessment on available capacity for each industrial area. - Agilis Networks has indicated that each industrial area noted for this study has fiber communications available, with the exception of the Kingsway industrial area (where work is presently underway).
Time Horizon	Over the full horizon of this strategy (through 2046).

City staff and Council should evaluate both industrial real estate market considerations as well as municipal finance/return on investment outcomes in deciding upon an infrastructure investment plan to support economic growth.

Recommendation	<p>A MARKET-DRIVEN INFRASTRUCTURE INVESTMENT STRATEGY: Servicing Fielding Road, Maley Drive, and Valley East.</p> <p>A market-focused approach to addressing the city’s infrastructure needs to support industrial growth is guided by two factors: (1) a strategy to prioritize investment in a high-demand location such as Fielding Road; and (2) diversifying the location of lands for development and ensuring a range of site selection options for users.</p> <p>The Fielding Road/Duhamel Road industrial area has attracted significant new industrial construction over the past decade, and was consistently identified as a prime location for development in our stakeholder discussions. Proximity to mining activities makes this a natural location for firms in the mining supply and services industry, as well as other complimentary industrial users and service providers. Since only two of the vacant industrial-designated properties in the Fielding Road/Duhamel Road area are greater than 10 hectares in size, it does not satisfy the objective of offering large sites that would be suited to land-extensive industrial operations.</p> <p>The 300+ hectare Maley Drive industrial area was submitted to the Ontario Government by the City of Greater Sudbury under the Job Site Challenge partnership opportunity. Introducing the required infrastructure to facilitate build-out of this area would provide large parcels well suited for large-scale development. As well, due to its location on the east side of Sudbury and separation from other sensitive land uses, these lands may be suited to accommodate heavy industrial uses, expanding the inventory of M3-designated land in the city.</p>
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Featuring 19 hectares of vacant land (roughly a one-quarter share of its total inventory of industrial-designated lands), the Valley East industrial area has the capacity to accommodate a modest component of the city's required industrial land demand over the coming decades. Notably, the vast majority of land parcels are small (0.25-0.75 hectares), so these lots would cater to smaller users. From a site selection perspective, bringing to market additional serviced lands in the north part of the city would be advantageous.

Further capital investment in the Kingsway industrial area is not required – it is ready to be built-out as new, subdivided lots for employment uses. As well, Ceasar Road has all of the required municipal services in place (although only a modest amount of undeveloped land). In this scenario, the Lasalle/Elisabella and National Street industrial areas would not see further infrastructure investment through the 2046 forecast horizon, as the quantity of serviced industrial lands city-wide is more than satisfied through the new investments made on Fielding Road and Maley Drive, and also Valley East.

Based on the ROI analysis completed by the Consultant Team, this scenario generates \$48.8 million of potential incremental property tax value (over 50 years), against estimated total costs of \$77.7 million. Of note, depending on the purpose/type/location of the required infrastructure, certain costs would be the responsibility of the municipality, while others would typically be borne by the private landowner(s). This does not account for additional costs associated with subdividing lands, building new roads, etc.

Although a negative ROI, this scenario achieves the goal of a diversified land supply in terms of location, accessibility, visibility, parcel size and orientation, ownership, and zoning. Also, the extent of land availability should act to enhance land price affordability, given the competitive land development market dynamics that would exist.

**A MUNICIPAL FINANCE-DRIVEN INFRASTRUCTURE INVESTMENT STRATEGY:
Promote/Incentivize Development in Kingsway**

The Kingsway industrial area features approximately 125 gross hectares of land (excluding the parcels identified for the proposed Place of Amusement [Casino], Hotel, Event Centre, and overflow parking. Accordingly, there is sufficient land to accommodate all of the city's anticipated industrial land demand through 2046 at this location. Water and wastewater infrastructure is already in place to facilitate the development of a subdivided employment area (note that the ROI analysis does not account for account for additional costs associated with subdividing lands, building new roads, etc.). Accordingly, the ROI for Kingsway is the most favourable of all industrial areas examined, at approximately \$34.7 million.

Development that occurs in Kingsway is subject to a Section 391 recovery charge which would be collected by the City to offset past capital expenses incurred. In order to stimulate growth, the City could introduce a range of incentives through a Community Improvement Plan. Rather than investing in new infrastructure in other areas of the city, development incentives could be targeted to Kingsway to accelerate the pace of land absorption (refer to the discussion of Incentive Programs in Appendix 4).

The limitation of this strategic approach to investment is that other areas of the city do not see new/upgraded infrastructure that is required to support growth. Fewer site selection opportunities for users could result in lost economic opportunities that instead turn to markets elsewhere. A key disadvantage of this strategic approach is the concentration of land ownership and potential resulting impact on land availability/pricing, versus the more diffused pattern of property ownership that would be achieved in servicing multiple employment areas. Depending on the nature of the build out of Kingsway, it is uncertain whether large parcels would be created to accommodate land-extensive uses, or whether heavy industrial operations could be integrated in compatibility with other land uses.

	<p>CONCLUSION</p> <p>The strategic approaches presented above are just two examples of the varying directions City staff may explore in addressing the land servicing needs to promote economic development across Greater Sudbury. Other combinations of servicing options can be evaluated using the ROI Calculator tool. The extent of municipally-funded versus developer-funded capital costs is also an important consideration. Overall, City staff should be responsive to landowner inquiries seeking to service employment lands in alignment with the strategic approach that is adopted.</p>
Time Horizon	Over the full horizon of this strategy (through 2046).

9.3 Miscellaneous

The following additional strategic recommendations are provided which address miscellaneous subjects of relevance to the Employment Land Strategy. The Consultant Team has provided an indication of the related timing for each recommendation.

MISCELLANEOUS	
City staff should liaise with local mining companies to explore the potential to unlock surplus lands for future development.	
Recommendation	<p>Across the City of Greater Sudbury there are considerable land holdings controlled by two major mining companies – Glencore and Vale. In discussion with stakeholders, there appears to be an absence of a framework to work with these mining companies to get lands made available for non-mining purposes, where such potential may exist. These are lands controlled by the mining companies which are currently held in order to provide buffering for their operations from adjoining land uses, and which have no proven mineral reserves. Unlocking some of these lands would introduce new sites that may be highly desirable for prospective users in the mining supply and services industry in particular, given their proximity to existing mining operations.</p>
Time Horizon	Short-term (2-5 years) to Medium-term (6-10 years).

City Hall bureaucracy is perceived by some market participants as an impediment to development.	
Recommendation	<p>In discussion with stakeholders, there were several respondents that indicated that City Hall is not customer-service focused, and that there is a perception of “red tape” and roadblocks. As well, inter-departmental friction was identified as an obstacle to development. A common view is that a more streamlined process is required, and that there is a need for “buy-in” from all departments involved in the process. There is no “champion” to move development approvals along the process. In the course of the Consultant Team’s stakeholder discussions, comments were generally high-level in nature, with few specific examples to draw upon. Ultimately, similar sentiments have been heard in many municipalities that the Consultant Team’s personnel have worked with in the past – these are not unique to Greater Sudbury.</p> <p>A relatively slowly growing municipality such as Greater Sudbury should be able to be highly responsive to development inquiries and applications. Several improvements have been enacted by the City in recent years to address some of the issues raised, including the Sudbury Planning Application Review Team (SPART) pre-consultation process; the Land Management Information System (LMIS); and the establishment of the Development Ambassador position within the City’s Economic Development division. While an operational review is not within the scope of this project – and no specific recommendations are made in this report – the sentiments expressed by some stakeholder provoked our commenting on this issue.</p>
Time Horizon	Immediate (within the next 12 months).

The City has excessive fire flow requirements which impacts development potential, according to some stakeholders.	
Recommendation	In discussion with some stakeholders, the fire flow requirements for new development – or expansion of existing uses – is a barrier to growth. There is a perception that the City’s standard for fire flow is excessive. It is not within the technical capabilities of the Consultant Team to investigate this topic. Rather, it is advised that City staff survey other municipalities to explore whether local fire flow standards are in line with common practice, and to weigh the costs and benefits of the current fire flow requirements.
Time Horizon	Immediate (within the next 12 months).

In addition to these strategic recommendations, please refer to Appendix 4 which contains additional in-depth analysis comparing Greater Sudbury to a number of other municipalities in terms of key industries and targeted employment growth sectors, employment/industrial land supply, industrial land prices, industrial development charges, industrial property taxes, incentive programs, and best practices for municipally-owned industrial/employment lands.