

Mohawk Council of Kahnawà:ke Summarized Copy of Feasibility Study on the Returned Highway 30 and Chateauguay Lands

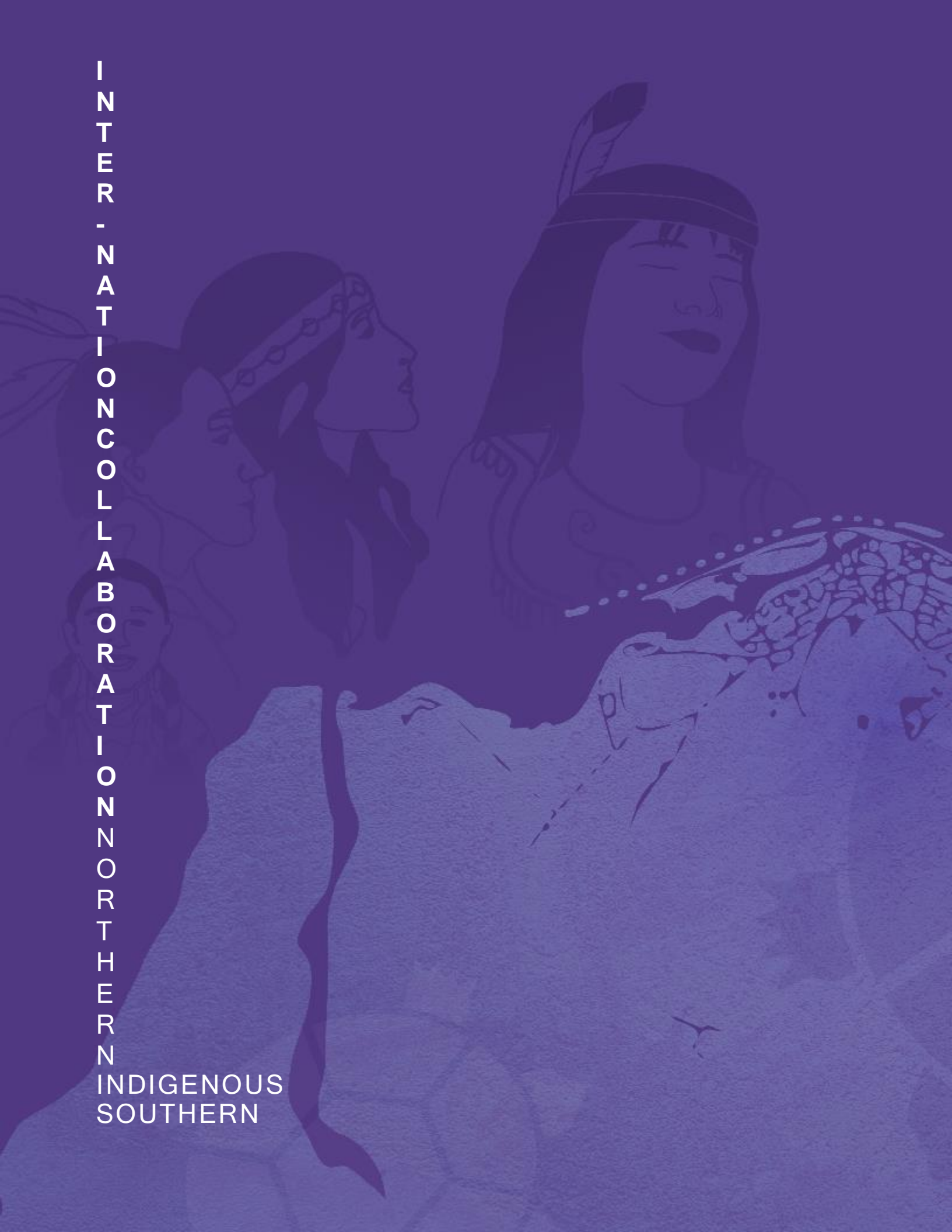
For consultation purposes only

The Mohawk Council of Kahnawà:ke (MCK) Lands Unit mandated the consulting firm BC2 to conduct a feasibility study concerning several parcels of land along the boundaries of Highway 30 and Chateauguay that were recently transferred back to the community by the federal government. As mandated, BC2 developed an extensive report on the feasibility of the types of designations for the parcel lands. To ensure the community can share feedback on the future of these lands, the MCK is currently undergoing a consultation process on potential designation options.

It is crucial for all community members to have access to the information on the lands, surrounding environments and access issues in order to provide feedback. To ensure that the consultation process remains impartial, the MCK has summarized this feasibility study, only removing information that may lead or entice opinions. To this end, the summary provides insights into the constraints that exist for each parcel, further allowing community members to share their concerns without influence.

For further information, contact Veronica Leborgne, Director of Lands, at (450) 638-8244.

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Returned Highway 30 and Chateauguay lands

Feasibility Study

JANUARY 2025 | **PROJECT 52572303**

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PROJECT OVERVIEW



The Mohawk Council of Kahnawà:ke (MCK) Lands Unit mandated BC2 to conduct a feasibility study concerning several parcels of land along the boundaries of Highway 30 and Chateauguay that were recently transferred back to the community by the federal government. This feasibility study establishes a baseline understanding of potential land use options. These lands are currently undesignated and consist of a total of 559.3 acres (225 hectares) divided into six parcels of land.

This study was developed in collaboration with the Highway 30 Lands committee. A half-day working session was carried out with the Highway 30 Lands Committee to conduct a SWOT analysis and to identify potential opportunities and challenges for development.



BACKGROUND

In the 1990s, the federal and provincial governments expropriated approximately 700 acres of land from Kahnawà:ke to build a new segment of Highway 30 between Chateauguay and Sainte-Catherine. As part of the agreement reached with the community, an equal amount of land was to be identified and returned to the reserve. However, the return process was delayed by a lawsuit filed by adjacent municipalities in 2013. Currently, there remain 211 acres to be identified and returned to Kahnawà:ke as part of this agreement (Rice, 2020). Importantly, these 211 acres do not include other lands that may be returned as part of any current or future land claim agreements, such as outstanding claims pertaining to the Saint Lawrence Seaway (SLS) lands.

OBJECTIVE / MANDATE

Over the previous two decades, the returned lands have been the subject of various preliminary studies, including soil quality assessments and archaeological studies. The objective of this feasibility study is to compile the results of these exploratory studies and use them to analyze and identify constraints to be considered when designating the lands.

METHODOLOGY

Steps to achieve the goals of the mandate included background and historical research, cartographic analysis, interviews with knowledgeable community stakeholders, review of environmental studies, demographic analysis, economic analysis, and review of relevant case studies. Various data was collected, analyzed, and synthesized into key findings. These findings led to the proposed conclusions and recommendations for potential land uses presented in this report.

Key reports and data sources used include:

- › **Land use planning resources:** the Kahnawà:ke Land Use Plan Framework (2018) and the Land Use Plan Survey Results (2016).
- › **Housing analysis reports:** the Housing Review Presentation (2023) and the AFNQL report on housing needs in Kahnawà:ke (2022).
- › **Environmental assessments:** the KEPO ecosystem inventory (2024), soil quality memo (2023), and MTQ biodiversity reports (2009), among others.
- › **Historical resources:** the pamphlet on the Seigneurie of Sault St. Louis (2024/2005) and the Synopsis of the Recent History of the Mohawk Council of Kahnawà:ke (2020).
- › **Media:** the Mohawk Council of Kahnawà:ke Press Release - A30 Lands formally returned to Reserve status.
- › **Economic reports from Tawatohnhì saktha (Kahnawà:ke Economic Development Commission):** the Kahnawà:ke Labour Market Report (2013), the Kahnawà:ke Socio-Economic Report (2013), and the Kahnawà:ke Household Survey Report (2016).
- › **Studies on roadways and infrastructure:** the Feasibility Study on Possible Road Access for the Future Development Projects on Land Along Autoroute 30 (2013), the Socioeconomic Impact Assessment (on water and sewer infrastructure) (2013), the Intermodal Feasibility Assessments Phase I (2014) and II (2015), the Industrial Corridor Infrastructure Servicing SLS Lots Feasibility Report (2015), the Reconstruction of route 207 between highway 30 and road 132 in the Mohawk territory of Kahnawà:ke (2015), and the Presentation to the Highway 132 Committee on Plans for Highway 30 and SLS Lands (2018).
- › **Interviews:** with knowledgeable community stakeholders.
- › **SWOT analysis:** developed during the workshop session(s) with MCK representatives to identify issues, constraints, and brainstorm possible scenarios.
- › **Case studies** with important and inspirational similarities.

KEY FINDINGS AND RECOMMENDATIONS

The objective of any recommendations made for the future use of the returned lands is to reflect the wishes, values, and priorities of the members of the community of Kahnawà:ke, in addition to those of the MCK and the Lands Designation Working Group. They take into account the empirical findings of the feasibility study and aim to promote uses that help to meet the existing and future needs of the community, consider the regional dynamics at play, and are feasible with respect to the practical constraints of any potential land designation.

Photo of the Highway 30 lands prior to the opening of the highway



SECTION 02

CONTEXT



This section presents an overview of the local and regional context of the project.



STUDY AREA LOCATION

The study area is made up of six parcels of land located within the Kahnawà:ke Mohawk territory (see figure). Parcels A, B, C, and D (also known as Lot 62 Block H, Lot 177 Block G, Lot 176 Block G, Lot 175 Block G, and Lot 185 Block F) are in the southern-most part of the study area and lie adjacent to Highway 30. Parcel E (Lot 111 Block B) is to the west and neighbors the boundary of Chateauguay. Together, the surface area of the parcels is 559.3 acres (225 hectares).

Lots A through D are situated approximately 2.9 kilometres from Kahnawà:ke’s village core and south of the Honoré-Mercier Bridge. Parcel E is approximately 5 kilometres west of the village core and approximately 7 kilometres from the Honoré-Mercier Bridge. The geographical coordinates of the center point of each parcel of land, as well as their surface area and existing primary land uses are shown in the next table.

The Highway 30 lands are bordered by a mix of Kahnawà:ke private and public lands to the north and Highway 30 directly to the south. To the east of parcel A is Highway 132; parcel C is directly south of the JFK Quarry, and parcel D borders Chateauguay to the west.

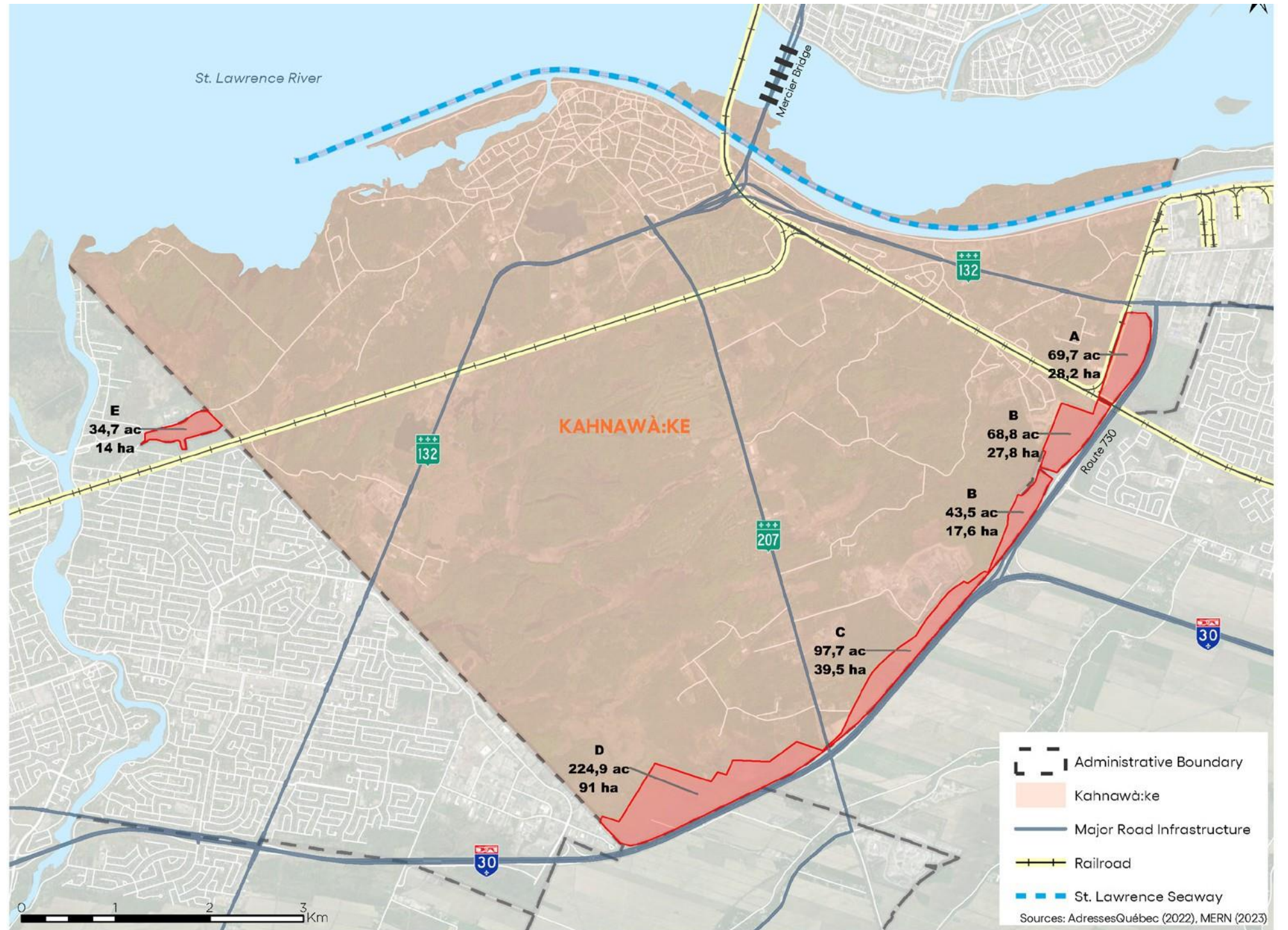
Lot E borders the City of Chateauguay with Chemin Saint-Bernard to the north, the Montreal Conrail Secondary Railway to the south, Chemin Du Crist-Roi to the west, and private Kahnawà:ke land to the east.

Prior to their return to Kahnawà:ke, parcels B, C, and D (Lot 176 Block G, Lot 175 Block G, and Lot 185 Block F) were used for agricultural purposes. Parcels A and B (Lot 62 Block H and Lot 177 Block G) are wetlands.

Identification of the returned parcels

PARCEL	LOT #	LATITUDE	LONGITUDE	AREA (ACRES)	EXISTING PRIMARY LAND USE	PREVIOUS DESIGNATION (RCM)
A	Lot 62 Block H	45,390412° N	73,607264° W	69.7	None/undeveloped	Heavy industrial
B	Lot 177 Block G	45,38285° N	73,614955° W	68.8	None/undeveloped	Agricultural
B	Lot 176 Block G	45,375223° N	73,621533° W	43.5	None/undeveloped	Agricultural
C	Lot 175 Block G	45,361854° N	73,637046° W	97.7	Agriculture/undeveloped	Agricultural
D	Lot 185 Block F	45,348278° N	73,665607° W	224.9	None/undeveloped	Agricultural
E	Lot 111 Block B	45.382777° N	73.734444° W	34.7	None/undeveloped	Majority-residential mixed-use

Location of each returned parcel and its total surface area



REGIONAL ENVIRONMENT

Kahnawà:ke is situated directly adjacent to the Regional County Municipality (RCM) of Roussillon, southwest of Montreal, on the south shore of the Saint Lawrence River. The RCM contains the 11 municipalities of Candiac, Chateauguay, Delson, La Prairie, Léry, Mercier, Saint-Constant, Saint-Isidore, Saint-Mathieu, Saint-Philippe, and Sainte-Catherine. Despite its proximity to Kahnawà:ke, neither the RCM nor its municipalities have jurisdiction over land use planning or other matters in Kahnawà:ke.

The RCM of Roussillon had a population of 185,568 at the time of the 2021 federal census, which was 11.7% of the population of the larger administrative region of Montérégie. It is the most populous and most densely developed RCM in the region. Situated at the periphery of the Montreal metropolitan area, Roussillon is characterized by a strong duality between urban and agricultural land uses.

The RCM has grown significantly in recent decades, with most of its housing stock having been built since 1980. 70% of the housing stock is single-family housing (freestanding, duplexes, and rowhouses) and an additional 25% consists of apartments in buildings of five storeys or less (Statistics Canada, 2021). Overall, the development style of the RCM of Roussillon is one of urban sprawl in relation to the larger Montreal urban region;

Points of interest in the region

Industrial areas

There are two main clusters of industrial activity in the region surrounding Kahnawà:ke: in Chateauguay, where the industrial park abuts Kahnawà:ke's southern corner, and in Sainte-Catherine, which has an industrial sector on its waterfront, directly east of Kahnawà:ke. This industrial sector exists in large part to service the Port of Sainte-Catherine, which is specialized in sending materials and provisions to northern communities and mining companies. It is served by both Canadian National and Canadian Pacific Kansas City rail lines (QSL, 2024). Both areas are in proximity to the returned Highway 30 lands (see figure).

Commercial areas

Several municipalities in Roussillon have commercial areas in proximity to Kahnawà:ke. Notable areas to consider include those in Chateauguay (Faubourg Chateauguay and the Chateauguay mall), the commercial sector along Highway 132 (Sainte-Catherine, Saint-Constant, Delson, La Prairie), Brossard (Taschereau Boulevard and Quartier Dix30), and Lasalle (Carrefour Angrignon), which is easily accessible via the Honoré-Mercier Bridge.

Tourism and recreation attractions

Important tourist attractions and recreation areas are scattered throughout the region as well. The Petite Voie du Fleuve, a popular cycling path, leads to the Récréoparc campground on the Saint Lawrence Seaway in Sainte-Catherine. This campground is part of a larger recreational sector in Sainte-Catherine, which also includes the Côte-Sainte-Catherine locks. Additionally, Saint-Bernard Island, in Chateauguay, is home to the Marguerite-d'Youville Wildlife Reserve and is occasionally accessible by river ferry, in addition to by road. Finally, the Canadian Railway Museum is a popular destination in Saint-Constant.

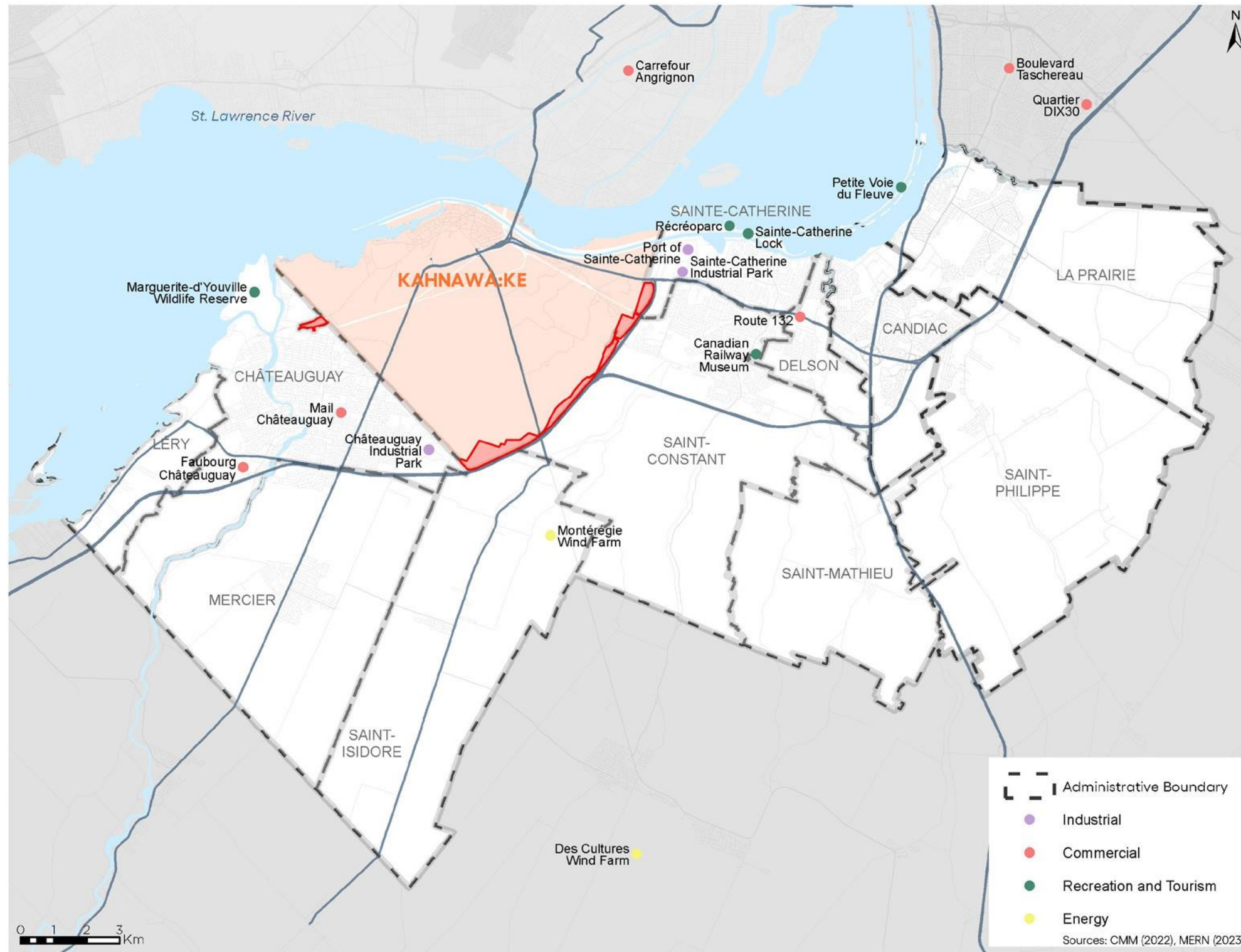
Other economic activity

The territory south of Kahnawà:ke is used for clean energy production with the Montérégie Wind Farm, Des Cultures Wind Farm, and the future Les Jardins Wind Farm. Montérégie Wind Farm is owned and operated by Kruger Energy Montérégie LP (KEMONT) and is operated by Kruger Energy Inc. Des Cultures Wind Farm is a 50/50 partnership between Kahnawà:ke Sustainable Energies, a subsidiary of the MCK, and Kruger Energies. The project is a 24 Mw wind farm comprised of six wind turbines and is in the southern part of Saint-Remi and Saint-Michel within the Montérégie region. Kahnawà:ke Sustainable Energies recently secured a second partnership with Kruger Energy and the MRC Jardins-de-Napierville in 2022. The project, Les Jardins, will consist of 20 - 25 turbines producing 147 Mw of wind energy. Les Jardins Wind Farm is expected to be operational by December 1, 2028, and will be located in the MRC-des-Jardins-de-Napierville.

Sociodemographic portrait

The population of the RCM of Roussillon grew 23.7% between 2006 and 2021, which is much higher than the growth rate of the larger region of Montérégie (as well as that of the province of Quebec) for the same period. It is also the fifth highest of all the entities that make up Greater Montreal. The highest rates of growth were seen in the municipalities of Saint-Philippe, Mercier, and Candiac (Statistics Canada, 2021).

Location of Kahnawà:ke in relation to neighboring municipalities and points of interest in the region



Photos of the Des Cultures Wind Farm (Projet Éolien des Cultures, 2019)



For the same period, the number of households in Roussillon grew at a rate that outstripped population (29.4%). The highest growth was seen specifically for one-person households, which increased by 39.4%. This suggests a fragmentation of households that could affect the demand for certain types of housing, such as smaller units. However, there has also been clear growth of five-person (or greater) households, having increased by 21.1%, suggesting a greater prevalence of families settling in the region. Although these two facts may seem contradictory at the RCM level, the growth of these two different types of households is not evenly distributed across the region. The municipalities of Delson, Saint-Constant, Saint-Philippe, La Prairie, Saint-Isidore, and Saint-Mathieu had the highest growth of one-person households, while family households grew most in Mercier, Saint-Philippe, and Chateauguay (Statistics Canada, 2021). In summary, the increasing prevalence of people living alone, as well as that of large families, implies great variation in the housing needs of the rapidly growing population of the region.

The growth in the number of one-person households also implies that Roussillon’s population is aging. A high growth rates of the population aged 65 or older between 2006 and 2021 also supports this (Statistics Canada, 2021). Population models from the *Institut de la Statistique du Québec* (ISQ) suggest that this trend will likely continue but slow in the coming decades (Institut de la statistique du Québec, 2022).

The population and number of households are also expected to continue to grow between 2021 and 2041, at rates of 26% and 30.5% respectively (Institut de la statistique du Québec, 2022). It is important to note that the ISQ’s population projections have a large margin of error at the scale of the RCM. However, it is still interesting to note the likelihood of continued growth.

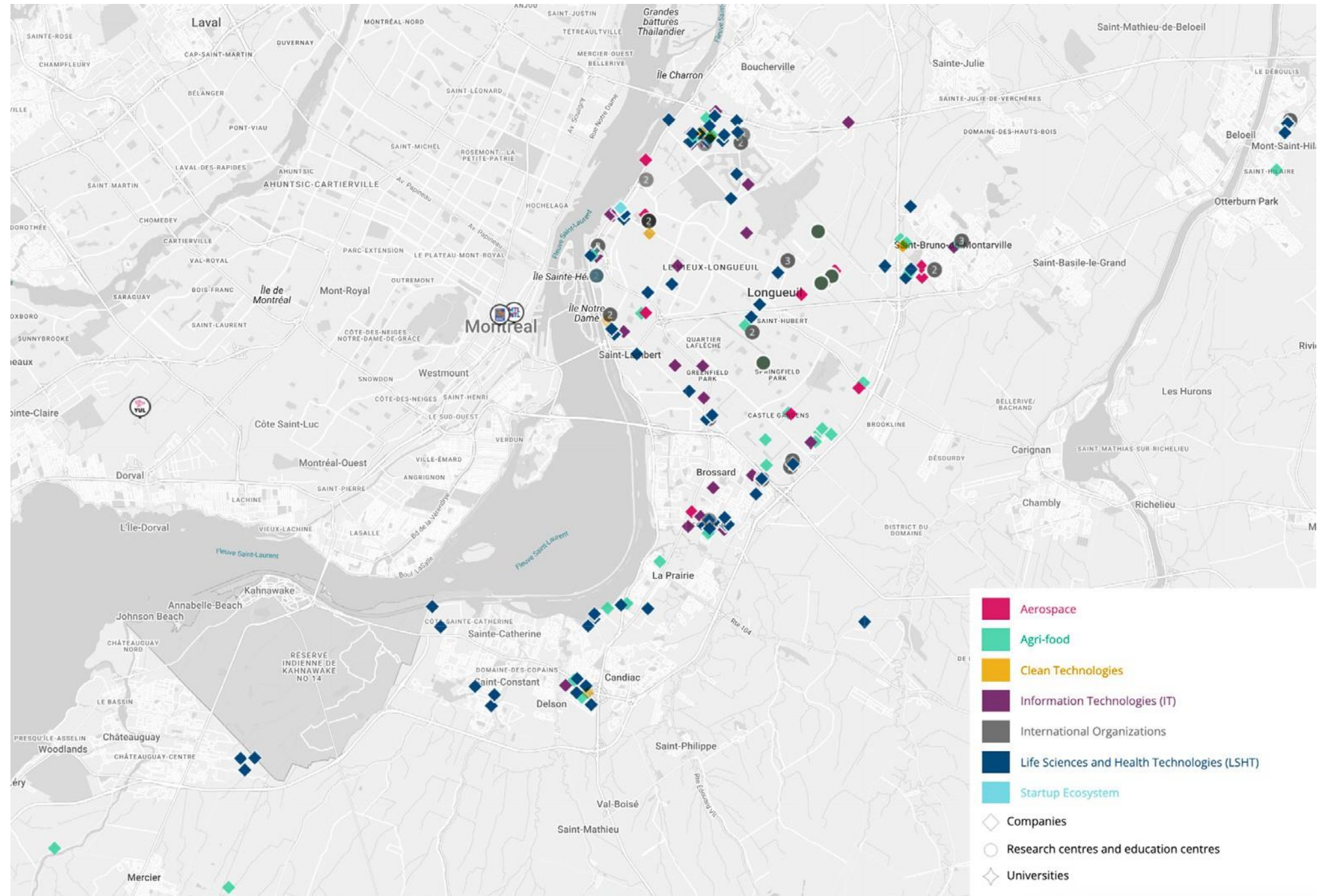
Economic portrait

The Roussillon regional economy is characterized by healthcare and social services (13.2%), retail (12.2%), manufacturing (9.8%), educational services (7.8%), and construction (7.5%) according to the 2021 census (Statistics Canada, 2021). Demand for additional retail in the region is likely saturated due to the recent development of Quartier DIX30 in nearby Brossard, as well as the prevalence of other retail centers throughout the RCM.

Additionally, the economic development agency Montreal International has identified the following sectors as leading growth industries in Greater Montreal: clean energy technology, information technology/software, aerospace, visual effects/animation, video games, artificial intelligence, life sciences/health technologies, cybersecurity, fintech, electric/smart transportation, and food processing (Montreal International, 2024a). These leading industries are notably different than those of Kahnawà:ke (see section 3.4), despite the close physical proximity between the community and Roussillon.

Previous studies have shown that the greater Montreal region is well-situated geographically to act as an intermodal shipping and logistics hub. This is due to the existence of the Ports of Montreal and Sainte-Catherine, expected increases in traffic through the Saint Lawrence Seaway, railway infrastructure, and trucking routes to the United States (Demers Beaulne, 2014).

Businesses and organizations by sector on Montreal’s south shore



Source: (Montreal International, 2024b)

| CONTEXT

The 2021 census profile for the RCM also shows that over half of all residents of the RCM commute to workplaces outside of Roussillon. Approximately 22% commute within their home municipality, and a further 21% commute to a neighboring municipality within Roussillon (Statistics Canada, 2021). From this data, we can surmise that the municipalities surrounding Kahnawà:ke are closely economically linked to each other and to Greater Montreal.

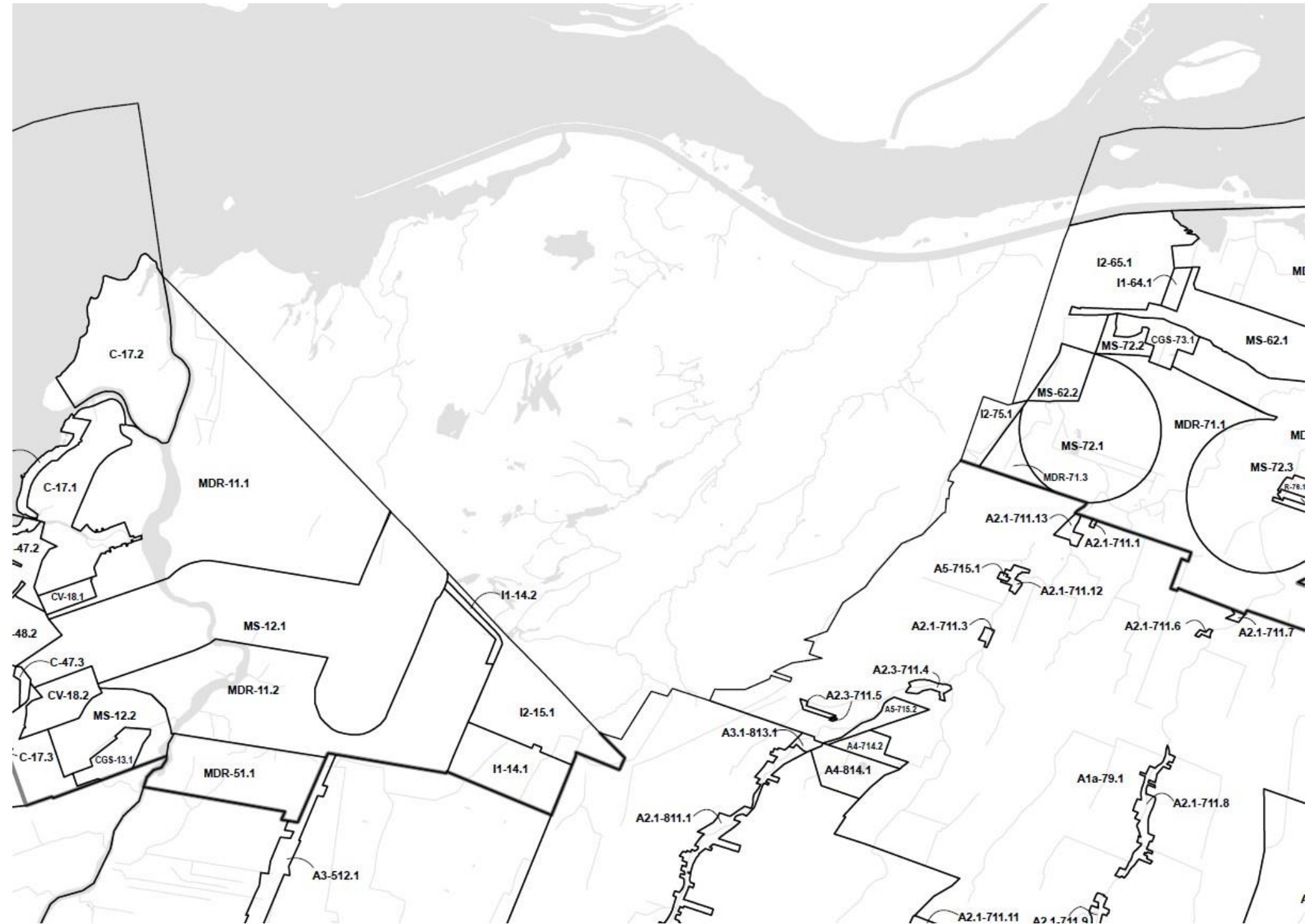
As previously noted, continued growth and development are expected in the region. Growth is anticipated to continue to be most concentrated in municipalities that have seen the highest growth rates in recent years, notably Saint-Philippe and Mercier (Institut de la statistique du Québec, 2022; Statistics Canada, 2021). As urban sprawl and outward expansion continues, it is likely that all municipalities in the RCM with vacant land and transportation connections to Greater Montreal will experience growth.

Regional planning portrait

In order to provide context-sensitive land use recommendations for the returned parcels, it is important to understand the types of future development planned for the surrounding area. As noted in a previous section, the parcels share borders with several different municipalities that are part of the RCM of Roussillon. This section provides an overview of the land use designations for the land adjacent to the returned parcels in order to provide a portrait of expected future development surrounding the parcels.

The RCM of Roussillon's land use planning and development plan (also known as the "RCM plan" and the "Schéma d'aménagement" in French) dates to 2006 and is currently undergoing a major revision. It was last updated in 2021. The RCM plan defines the major orientations for future growth and development for all municipalities on the territory of the RCM. The planning programs (or master plans) and planning bylaws of these municipalities must conform to these major orientations and provide greater detail with regard to permitted uses and building forms on their territory (Gouvernement du Québec, 2024a).

Major development orientations for the territory surrounding Kahnawà:ke according to the Roussillon RCM Plan



Source: (RCM of Roussillon, 2021)

High-level land use orientations for the territory surrounding Kahnawà:ke vary greatly from city to city. Clockwise from the northeast corner of Kahnawà:ke, the land use orientations shown in the previous figure are as follows:

Major development orientations for the territory surrounding Kahnawà:ke according to the Roussillon RCM Plan (RCM of Roussillon, 2021)..

CODE	DESIGNATION	MUNICIPALITY	ADJACENT TO RETURNED PARCEL
I2-65.1	I2 - Heavy industrial	Sainte-Catherine	A
MS-62.1	MS - Structuring mixed-use	Sainte-Catherine	A
MS-62.2	MS - Structuring mixed-use	Sainte-Catherine	A
MS-72.1	MS - Structuring mixed-use	Saint-Constant	A
MDR-71.3	MDR - Majority-residential mixed-use	Saint-Constant	A
I2-75.1	I2 - Heavy industrial	Saint-Constant	A
A1A-79.1	A1a - Agricultural priority	Saint-Constant	B, C
A1A-89.1	A1a - Agricultural priority	Saint-Isidore	D
A2.1-811.1	A2.1 - Agricultural-residential, type 1	Saint-Isidore	D
A3.1-813.1	A3.1 - Agricultural-residential, type 3	Saint-Isidore	D
I2-15.1	I2 - Heavy industrial	Châteauguay	D
I1-14.2	I1 - Light industrial	Châteauguay	D
MS-12.1	MS - Structuring mixed-use	Châteauguay	D, E
MDR-11.1	MDR - Majority-residential mixed-use	Châteauguay	E

Generally, it appears that parcel A will continue to be surrounded primarily by industrial and commercial mixed-use developments, the land across Highway 30 from parcels B and C will continue to be used primarily for agriculture, parcel D will have agricultural activities to the south and industrial uses to the west, and parcel E will be surrounded by primarily residential uses. Detailed definitions of the land use designations in the table above can be found in the RCM Plan for Roussillon (RCM of Roussillon, 2021).

KEY ACTORS

Although the lands in question have been returned to Kahnawà:ke and are under the management of the MCK, it is important to understand the roles of the many external stakeholders and agencies in the region.

Kahnawà:ke community members

Members of the community of Kahnawà:ke play a vital role in decision-making, as the community strives to prioritize consensus-based decision-making. Kahnawà:ke has both traditional (longhouse system) and elected (Mohawk Council of Kahnawà:ke) governments in place. The Kahnawà:ke community broadly supports the “not one more inch” public policy, which emphasizes the need to avoid ceding any further Kahnawà:ke lands to external actors. However, it should be noted that community views of the practical implications of this policy are not monolithic. Some community members view this policy as applying mainly to external threats, while others apply it to internal development as well. Final decisions on land use designations for the returned lands will be made with the support of the community and in alignment with public opinion.

Mohawk Council of Kahnawà:ke (MCK)

The Mohawk Council of Kahnawà:ke is the organization that provides governmental, administrative, and operational services to the community of Kahnawà:ke. Its operations are structured through two main branches: political and administrative/operational.

The political arm of the MCK includes the Council of Chiefs and the Office of the Council of Chiefs (OCC). The Council of Chiefs, headed by the Grand Chief and comprised of 12 Chiefs in total, is the primary body in charge of governance and provides political direction on the affairs of the community. Each Chief is responsible for leading one or two portfolios of projects, grouped according to theme, in terms of government relations. Chiefs also support additional portfolios. As of 2024, the portfolio lead for Lands and Territory is David Diabo, with Paul Rice and Iohahi:io Delisle also providing support. The OCC supports the Council by providing technical and advisory services (Mohawk Council of Kahnawà:ke, 2024b). These current chiefs were elected in July 2024.

The administrative and operational arm of the MCK includes the following departments:

- › Executive Office:
 - Strategic and Organizational Development
 - Public Relations
 - Legal Services
 - Human Resources
 - Information and Records Management
 - Finance and Administration
 - Asset Management
 - Revenue and Business Development Unit
- › Operations:
 - Infrastructure Services - Capital and Public Works
 - Lands
 - Environment
 - Client Based Services - Recreation, Social Assistance, Membership, Kanien'kéha Language & Culture
 - Housing
 - Sports and Recreation
 - Labor Office - Workmen's Compensation and Qualifications
- › Public Safety
- › Justice Services, including the Court of Kahnawà:ke (Mohawk Council of Kahnawà:ke, 2024e)

The MCK Lands Unit is charged with the task of stewardship over the territory of Kahnawà:ke. Its mandate is to maintain “the balance between development and preservation for community members and for generations to come” by developing policies, regulations and providing services that include mapping, land surveys, permitting, historical reviews, and subdivision (Mohawk Council of Kahnawà:ke, 2024d).

The Kahnawà:ke Environmental Protection Office (KEPO) is also an important source of information on the returned parcels of lands. Established in the 1980s to address environmental justice concerns, KEPO has since developed a vast body of knowledge on the local environment and ecosystems by carrying out rigorous scientific studies. The Office also performs environmental inspections, applies policies and regulations, and carries out education campaigns to improve environmental stewardship and protection among community members (Mohawk Council of Kahnawà:ke, 2024c). The habitats and species found on the returned territory, as well as any potential contamination or other issues, will influence their designation potential and suitability for different uses.

Tewatohnhi'saktha: Kahnawà:ke Economic Development Commission

Established by the MCK, Tewatohnhi'saktha is the economic and workforce development organization for Kahnawà:ke. The mission of the organization is to promote economic self-sufficiency and growth by “investing in people and businesses, as well as other economic opportunities” (Tewatohnhi'saktha, 2024b). A key aspect of Tewatohnhi'saktha's work is to ensure that economic development occurs in a manner that is consistent with Mohawk cultural values and creates collective prosperity for seven future generations. Tewatohnhi'saktha has previously been involved in the development of proposals and recommendations for the returned lands; many aspects of those reports are important to consider in this analysis.

It should be noted that the MCK also manages an economic development portfolio, guided by the Revenue and Business Development Unit. This unit “oversee(s) community-owned economic projects, as well as the Business & Economic Development Fund,” among other responsibilities, and has the goal of building capacity toward economic independence for Kahnawà:ke (Mohawk Council of Kahnawà:ke, 2022).

Ministère des Transports du Québec

The Ministère des Transports du Québec (MTQ) is responsible for the planning and construction of access ramps to and from Highway 30, setting norms for their location and configuration. As well, any water and sewer installation along Route 207, would require consultation with the MTQ. It is important to understand the constraints on building new access points to the Highway and providing water and sewer to the Highway 30 lands, and the effect that these constraints will have in dictating potential uses for the returned parcels. This is discussed in more detail in section 3.5.

Canadian Pacific Kansas City Limited

The Canadian Pacific Kansas City railway (CPKC) runs across Canada and connects to the United States and Mexico. CPKC has tracks in and around Montreal; formerly, these included tracks on the returned lands (parcel E). While the tracks on parcel E have been removed, CPKC may claim it continues to hold rights to the land. For this reason, the MCK may choose to engage the CPKC in the land use designation process.

RCM of Roussillon and adjacent municipalities

The Regional County Municipality of Roussillon is responsible for land use planning and economic development at the scale of the region, including the lands immediately bordering Kahnawà:ke. The adjacent municipalities of Chateauguay, Saint-Constant, and Sainte-Catherine (as well as all the other municipalities within Roussillon) have jurisdiction over land use planning and zoning matters within their municipal boundaries. Although these entities are not legally entitled to a role in the decision-making process regarding the returned lands, Tewatohnhi'saktha previously recognized the significance of these parcels at the regional scale and noted the importance of a collaborative approach when it comes to planning for regional economic development (Demers Beaulne, 2014). More recently, the MCK established a MCK and MRC de Roussillon Technical Liaison Committee to develop a working relationship, including a communication protocol that supports two-way information sharing on development and operations (Mohawk Council of Kahnawà:ke, 2024a).

Indigenous Services Canada

Given that Kahnawà:ke is a First Nations reserve, the department of Indigenous Services Canada (ISC) is also a stakeholder in land management and planning decisions. ISC also provides funding, training, and other resources for Indigenous communities to initiate land use planning and environmental management projects (Indigenous Services Canada, 2024a, 2024b).



SECTION 03

COMMUNITY PORTRAIT



HISTORIC OVERVIEW OF LAND AGREEMENTS AND GOVERNANCE

It is important to consider the returned Highway 30 lands within the historical context of land claims and agreements in and around Kahnawà:ke. Traditionally, the Mohawk people occupied a territory including northeastern New York state, northern Vermont, southeastern Ontario, and southwestern Quebec (Saint Regis Mohawk Tribe, 2024). During the age of European naval imperialism in the 16th and 17th centuries, the French Crown promulgated claims to exclude competing European sovereigns from the use of parts of Turtle Island for the exploitation of its natural resources for the enrichment of the metropole.

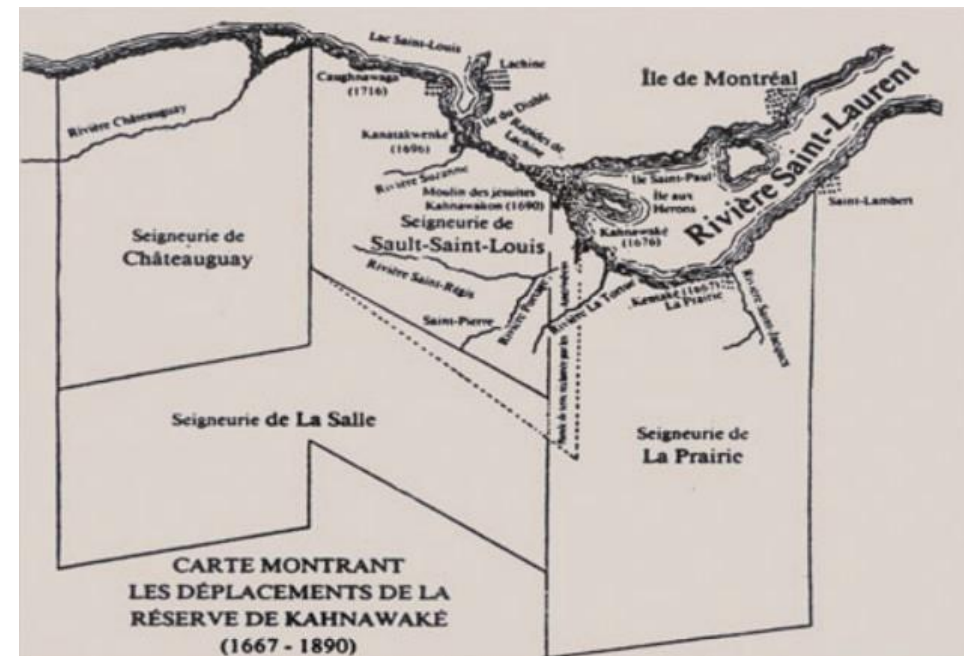
Without de facto authority or control over the land and without the knowledge or consent of the overwhelming majority of its inhabitants, the French Crown professed to grant exclusive use or “concessions” of land to various French settler parties, among them the Jesuit priests. In 1680, the Crown ostensibly granted two such concessions – an area of 45,000 acres – to the Jesuits, creating the Seigneurie of Sault Saint Louis (SSSL) on the land which Canadian authorities now recognize to be Kahnawà:ke, surrounded the RCM of Roussillon.

Under the settler seigneurial system, a “Seigneur” was permitted to concede land to French settlers. However, the French Crown recognized the SSSL grant was set aside exclusively for the Mohawks’ use and occupation--French subjects had no rights to settle within its boundaries.

Nonetheless, the Jesuits illegally conceded lands to settlers starting around 1703, and the land base of Kahnawà:ke was reduced to less than 13,000 acres (Mohawk Council of Kahnawà:ke, 2004).

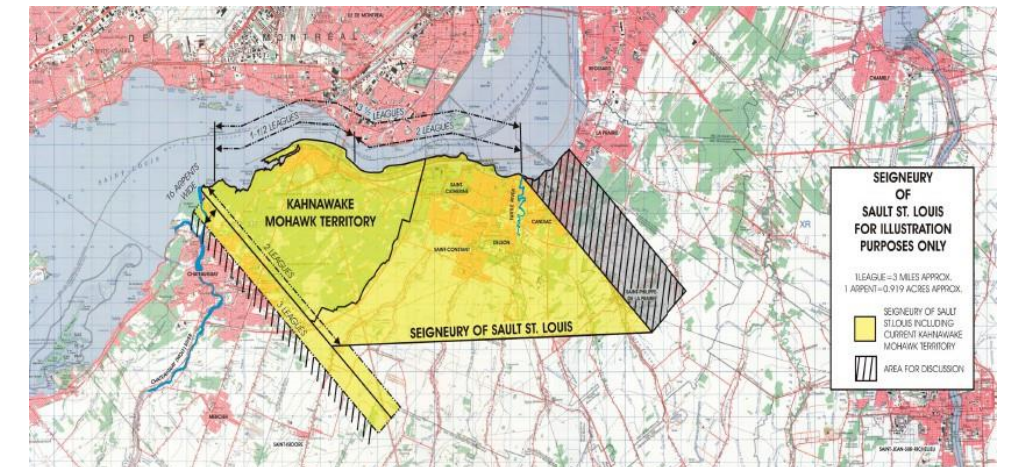
Throughout various regime and legislative changes, there have been efforts to address this historic grievance, but there has never been a full resolution of the issue. Meanwhile, the erosion of Kahnawà:ke’s territory has continued in the modern era, with the expropriation of lands for the development of major infrastructure projects like the Saint Lawrence Seaway, the Highway 30 bypass, Highway 132 and 138, the Mercier Bridge, Hydroelectric lines, and the railways. In both cases, significant acreage was expropriated from the community (Mohawk Council of Kahnawà:ke, 2004; Phillips, 2000).

Seigneurie of Sault Saint Louis boundaries and neighboring seigneuries



Source: (Mohawk Council of Kahnawà:ke, 2004)

Seigneurie of Sault Saint Louis boundaries with respect to modern-day municipal boundaries



Source: (Mohawk Council of Kahnawà:ke, 2004)

In this case, the Highway 30 bypass between Candiac and Saint-Constant, constructed in the early 2000s, involved the use of approximately 700 acres of Kanien’kehá:ka land from the land claim. Consequently, the lands used for the project were expropriated in exchange for the return of an equal amount of land to the community, and approximately 500 acres of land contiguous to the community was identified for this purpose. However, the return process was delayed by a lawsuit filed by the adjacent municipalities of Chateauguay, Saint-Constant, Saint-Isidore, and Sainte-Catherine in 2013. Currently, there remain 211 acres to be identified and returned to Kahnawà:ke as part of this agreement (Mohawk Council of Kahnawà:ke, 2018; Rice, 2020).

Legal Context and Governance

As of July 2018, the parcels discussed in this feasibility study have been officially returned to reserve status and are under the jurisdiction of the Mohawk Council of Kahnawà:ke. This took place over the course of a year, during which three Orders in Council (OIC) were issued. The details of these OICs are as follows:

- › OIC 2017-1187, September 22, 2017: return of parcel D (Lot 185 Block F), approximately 224.82 acres.
- › OIC 2018-0547, May 14, 2018: return of parcels B and C (Lot 176 Block G and Lot 175 Block G, respectively), approximately 141.32 acres.
- › OIC 2018-0886, June 22, 2018: return of parcels A, B, and E (Lot 62 Block H, Lot 177 Block G, and Lot 111 Block B respectively), approximately 173.19 acres.

Additionally, as the Highway 30 and Chateauguay lands include wetlands, it is important to consider the environmental protection measures that will constrain development. The MCK and KEPO are responsible for enforcing policies pertaining to wetland conservation; with Kahnawà:ke's Sanitary Conditions Law, last updated in 2012, outlining required steps before development in a wetland could proceed.

Wetlands on parcel A adjacent to Highway 30



Source: (taken by the project team, 2024)

3.1 COMMUNITY VISION STATEMENT

The community of Kahnawà:ke has had a community vision statement in place since 2009; this statement reflects the core values of the community and must be considered in respect to any designations to be made.

SOCIODEMOGRAPHIC PORTRAIT

This section provides an overview of Kahnawà:ke’s current demographics and possible future growth. The data sources used to create this portrait include the 2016 Kahnawà:ke Household Survey, the 2013 Tewaohni’saktha socioeconomic report (based on 2011 data), and a 2022 report (based on 2018 data) on housing needs for Kahnawà:ke by the Assembly of First Nations Quebec-Labrador (AFNQL). Having surveyed 723 of the 2,450 households in the community, the 2016 Household Survey had a response rate of 29.3%. Although we attempted to conduct a thorough analysis, the available data is limited in scope and likely out of date, meaning that there could be additional factors to consider that are not reflected here.

Population

The population of Kahnawà:ke can be tabulated in several different ways. According to the MCK’s website, the current on-reserve population of Kahnawà:ke is approximately 8,000 (Mohawk Council of Kahnawà:ke, 2023). Official membership numbers for the community of Kahnawà:ke from 2024, which include members living outside the official territory, and are based on matrilineal ties to the community, put the population at 6,551. Finally, Indigenous Services Canada considers the population of Kahnawà:ke to be 11,662 (of which 8,104 people are on-reserve residents and the remaining 3,558 are non-residents) (Indigenous Services Canada, 2024c).

It is important to understand that Indigenous Services Canada’s method of determining membership is based on blood quantum (or eligibility for status under the Indian Act) and does not reflect the traditions and laws of the Kanien:keha’ka of Kahnawà:ke. Kahnawà:ke’s official membership laws determine who can reside and become eligible for services (such as housing, water and sewer, etc) among other things, and not all people counted by Indigenous Services Canada are eligible under these laws. Therefore, we must consider several sources when attempting to quantify demand for housing.

Between 2000 and 2018, the population grew by 11.8%, with a variable rate of growth during this period. Kahnawà:ke’s growth has been slower in comparison to the overall rate for Quebec and Labrador First Nations (29.8%), but not insignificant (Assembly of First Nations Quebec-Labrador, 2022). Population forecasts show that growth is expected to continue but slow in the coming decades (Brant. J. et al., 2023). This indicates a clear need for long-range planning to anticipate and meet future community needs.

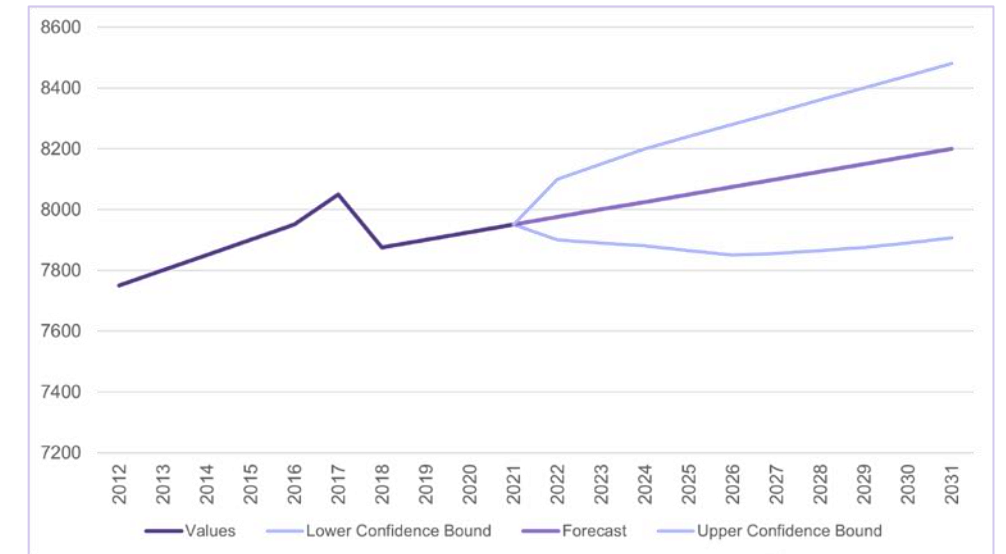
Age

The majority of Kahnawà:ke’s population is working age. According to the 2016 household survey, 60.1% of the population surveyed was between the ages of 25 and 64. Similarly, the 2018 housing needs report indicated that 44.8% of the population was between 30 and 64, with an additional 14.8% between 20 and 29. This is also upheld by the socioeconomic report, which showed 70% of the population was considered “working age” – between the ages of 15 and 64. Elders make up a small proportion of the population, with between 6.6% and 10% over the age of 65 (Abraira & Robert G. Friend Consultants, Inc., 2013a; Brosseau, 2016).

Gender distribution

The 2016 household survey indicated that the population of Kahnawà:ke was disproportionately female, at 55.2%. This is consistent with the 2011 Tewaohni’saktha socioeconomic report, which found that the population was 55% female and 45% male (Abraira & Robert G. Friend Consultants, Inc., 2013a). It is likely that this gender distribution has remained relatively consistent in the 2020s, although the data does not account for gender-diverse individuals.

Kahnawà:ke On-Reserve Population Forecast (2031)



Source: (Brant. J. et al., 2023)

Households and housing demand

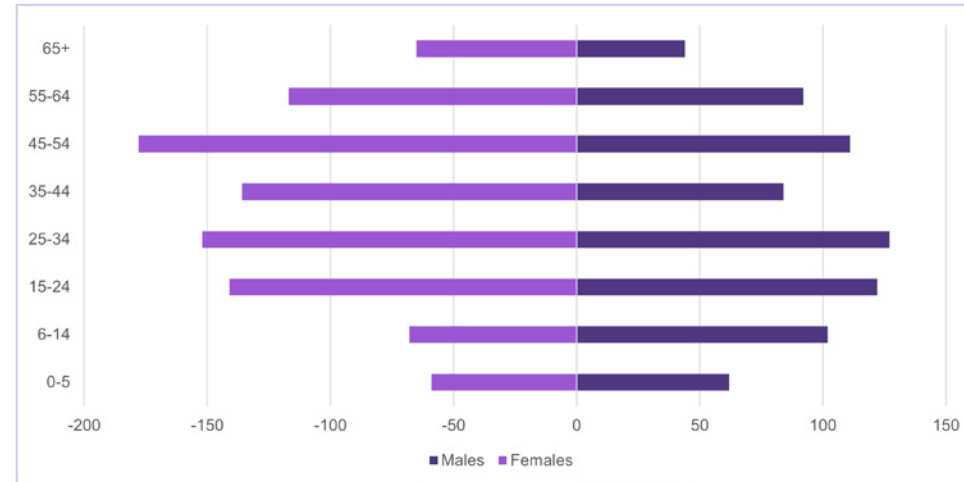
AFNQL reported that the average household size in Kahnawà:ke was 3.7, a figure that has remained constant since 2000. However, the 2016 household survey showed that, among the respondents, over 65% of households were composed of two people or less. Based on this information, we can conclude that households in Kahnawà:ke are relatively small. Indeed, compared to Quebec and Labrador First Nations overall, Kahnawà:ke experiences less issues related to housing overcrowding, although this problem should not be minimized (Assembly of First Nations Quebec-Labrador, 2022).

Furthermore, according to Tewatohnhi'saktha, in 2016, 77% of renter households intended to own a home. This information was extrapolated from data available in the 2016 household survey. Although dated, this figure shows a clear demand for additional housing in the community. Comparatively, the 2022 AFNQL report on housing needs indicated that there were

2,118 dwellings in Kahnawà:ke in 2018 (Assembly of First Nations Quebec-Labrador, 2022).

More up-to-date data on the number of dwellings in Kahnawà:ke was provided by the MCK's Capital Unit. This data showed that there was a total of 2,174 residential dwellings in the community: 1,735 connected to the existing water and sewer network and 439 using wells. This is a 3% increase since 2018. Assuming that the rate of population growth has remained approximately constant since 2018 (around 12%), it is likely that population growth is outpacing housing development in the community. The likelihood of a housing shortage is also supported by the 2023 study on housing demand by Daniel J. Brant and Associates, which advised of "pent-up demand" for housing in Kahnawà:ke.

2016 population pyramid for Kahnawà:ke



Source: (Tewatohnhi'saktha, 2024a)

Educational attainment

The highest level of education attained by community members was studied during the 2016 household survey, as well as the 2013 socioeconomic report. Overall, educational attainment is higher for younger generations and for women. As of 2016, 88% of survey respondents had at least a high school diploma, which represents a significant increase since 2011, when that same figure was 67.8% (Abraira & Robert G. Friend Consultants, Inc., 2013a; Brosseau, 2016). However, this disparity may be due in part to methodological differences in data collection. The distribution of education levels achieved is shown in the adjacent table.

Educational attainment for the community of Kahnawà:ke

	CEGEP				UNIVERSITY			Total
	High School	2-year program	3-year program	Apprenticeship or trade	Undergraduate	Graduate	None or unknown	
Females	280	69	52	149	129	43	67	789
Males	226	41	26	127	37	26	97	580
Total	506	110	78	276	166	69	164	1369
Percent	37.0%	8.0%	5.7%	20.2%	12.1%	5.0%	12.0%	100%

Source: (Brosseau, 2016)

Occupation and employment

In 2016, 30.2% of the population was not working (Brosseau, 2016). However, it is important to note that the "not working" category included full-time students, retired people, full-time caregivers, and other categories of unemployed people who would not typically be counted in the calculation of the unemployment rate. Only about 23% of the unemployed population (7% of the total population surveyed) was temporarily laid off or, otherwise, looking for work. Therefore, the approximate unemployment rate of Kahnawà:ke in 2016 was likely about 7%. In 2011, the unemployment rate for Kahnawà:ke was 11.4%, compared to 7.4% nationally (Abraira & Robert G. Friend Consultants, Inc., 2013a).

Almost three quarters (72%) of the employed population, as of 2016, was employed on a full-time, permanent basis. This is a smaller proportion than in other regions, though differences in data collection methods between the Kahnawà:ke reports and the federal census may affect this comparison's accuracy. 87.1% of respondents to the 2016 household survey indicated that they worked in Kahnawà:ke, while 8.5% worked outside of the community, and 3.6% worked both within and outside of the community. This is consistent with the data from 2011 as well (Abraira & Robert G. Friend Consultants, Inc., 2013a; Brosseau, 2016).

Additionally, it is worth noting that only 43.6% of respondents in 2016 were working in their field of study. The most common fields of study pursued by respondents from the community were humanities/social sciences, education, administration, business, social work/health care, community technologies, and biological technologies (Brosseau, 2016). However, in Kahnawà:ke, there is significant employment in public administration and the tobacco and gaming industries, as well as high and increasing employment concentration in lower, less transferrable skilled jobs. This implies that there is a mismatch between community members' training and the opportunities available locally.

About three quarters of the labour force is employed within the community's boundaries, likely due in part to availability of jobs, minimal travel time to work, non-taxable income, predominantly English-speaking employment, and in some industries, relatively high wages with no or minimal educational requirements. Institutional barriers to working off-reserve may also be a factor.

ECONOMIC PORTRAIT

This section presents the main economic sectors in Kahnawà:ke and the surrounding region to understand current and future economic opportunities. It is important to note that due to a lack of recent data, much of the information in this section comes from Tewaohnhisaktha's 2013 labour market report (which uses 2011 data) and from other dated sources. Although more up to date information is expected from various agencies in 2024, this analysis cannot currently paint a complete picture of current trends and demands, especially considering possible economic transformations due to the 2018 legalization of cannabis and the 2020 COVID-19 pandemic.

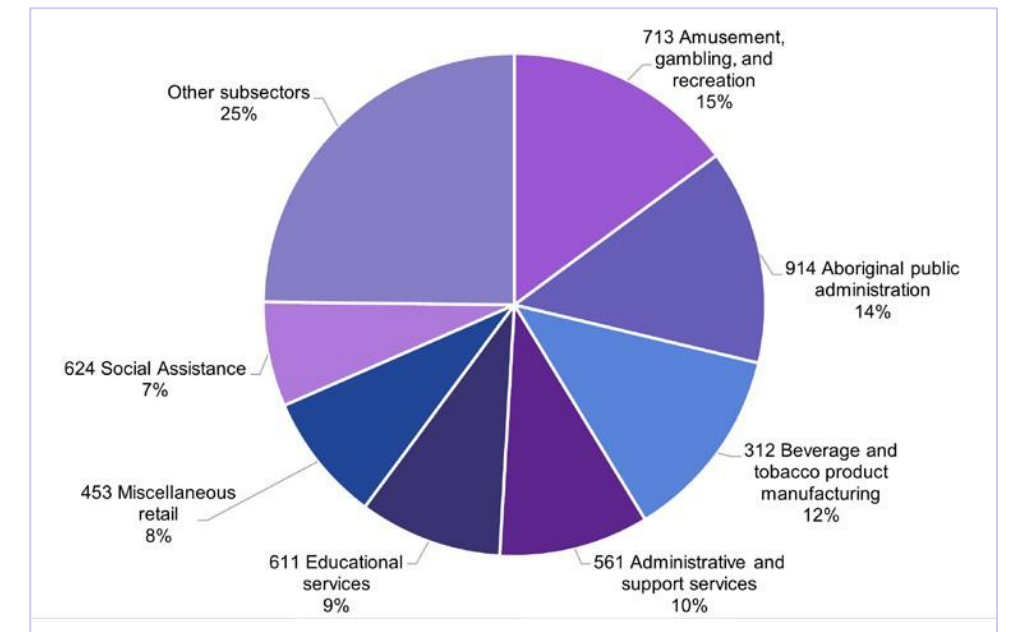
ECONOMIC SECTORS OF KAHNAWÀ:KE

The 2013 labour market report identified the following seven leading North American Industry Classification System (NAICS) sub-sectors providing full-time employment:

- › **713:** Amusement, gambling, and recreation
- › **914:** Aboriginal public administration
- › **312:** Beverage and tobacco product manufacturing
- › **561:** Administrative and support services
- › **611:** Educational services
- › **453:** Miscellaneous retail (primarily tobacco stores)
- › **624:** Social assistance (daycares, social work, etc.)

These seven subsectors comprise over three-quarters of full-time jobs offered in Kahnawà:ke with amusement, gambling, and recreation accounting for almost 15% of full-time jobs. Below is a chart representing the percentage of employers providing full-time employment for each leading subsector in Kahnawà:ke at the time the report was published.

Percentage of Employers Providing Full Time Employment for Each Leading Subsector in Kahnawà:ke



Source: (Abraira & Robert G. Friend Consultants, Inc., 2013b)

The report noted that Kahnawà:ke non workers represented 72% of the workforce at the time the report was published. The labour market report also drew several comparisons to the labour market with the rest of Canada. At the time the report was published, there were three times as many in the information, culture, and recreation and public administration sectors in Kahnawà:ke than in the rest of Quebec. It is also worth noting that 33% of jobs in Kahnawà:ke are in the public sector compared to 20.6% in the rest of Canada (Abraira & Robert G. Friend Consultants, Inc., 2013b).

These reports do not take the effects of the pandemic into account which heavily impacted the sales and services industries. Some of these sectors have yet to make a full recovery to pre-pandemic levels. A future labour report should include the impacts of the pandemic on the labour market. An updated labour market study will also help identify existing and future labour market needs.

Forecast and upcoming projects

A quantitative forecast for future economic growth in Kahnawà:ke was not available at the time of writing; however, we can discuss recent developments and known projects that will impact Kahnawà:ke's economic landscape.

In the gaming industry, one of the community's major poker establishments, the Magic Palace, announced a closure in late March 2024 (Magder, 2024). This has impacted approximately 130 employees, 10 – 15 percent of whom were Kahnawa'kehró:non (Bankuti, 2024). Although its restaurant, Mirela's, remains open, the future of the Magic Palace is uncertain.

The cannabis production and sales industries are also new to Kahnawà:ke in recent years. The Kahnawà:ke Cannabis Control Board (KCCB) regulates the industry and distributes permits for production, distribution, and sale in the community. According to KCCB regulations, there may only be one active distribution license in the community at a given time; dispensary licenses are separate and are limited to three in total. There is no limit on cultivation and processing licenses; there may be opportunities to develop cultivation and processing facilities in the community (Kahnawà:ke Cannabis Control Board, 2021, 2024).

In terms of hotels, Kahnawà:ke currently has one in operation and two planned. The Host Hotel, which has 17 rooms, is located directly adjacent to parcel A (Tourisme Autochtone Québec, 2024). Playground Poker also has plans to open an approximate 83-room hotel on its property (Kirby, Mackenzie, personal communication, May 1, 2024). There is also a hotel planned to open on Route 207, near the Lafleur Golf Course, which will have 36 to 38 rooms, a restaurant, and conference facilities (Brisson Dubreuil, 2021). This hotel would have good access to the Highway 30 lands. Additionally, there is a bed and breakfast (the Riverside Inn) with six rooms located in the community core. An in-depth study of demand for accommodation would be helpful; currently, it should not be assumed that there is an unmet need for more hotel rooms in the community.

The future Kahnawà:ke Cultural Arts Center



Source: (Kahnawà:ke Cultural Arts Center, n.d.)

Cultural Center

Construction is currently underway to build a new facility for the Kahnien'kehá:ka Onkwawén:na Raotitíohkwa Language and Cultural Center (KORLCC), Turtle Island Theatre, and a Tourism Visitors Centre. The result of a partnership between the MCK, KORLCC, and the Turtle Island Theatre, the new building will be located on Route 132, to the west of the Kahnawà:ke Survival High School and bordering the municipality of Sainte-Catherine. It will replace the former KORLCC building, which was demolished in 2023 (Kahnawà:ke Cultural Arts Center, 2024). Plans and feasibility were approved on June 3, 2024. It is hoped that the new Center will attract visitors to learn about local culture and history at its museum, where artifacts will be stored, and for events at its theatre.

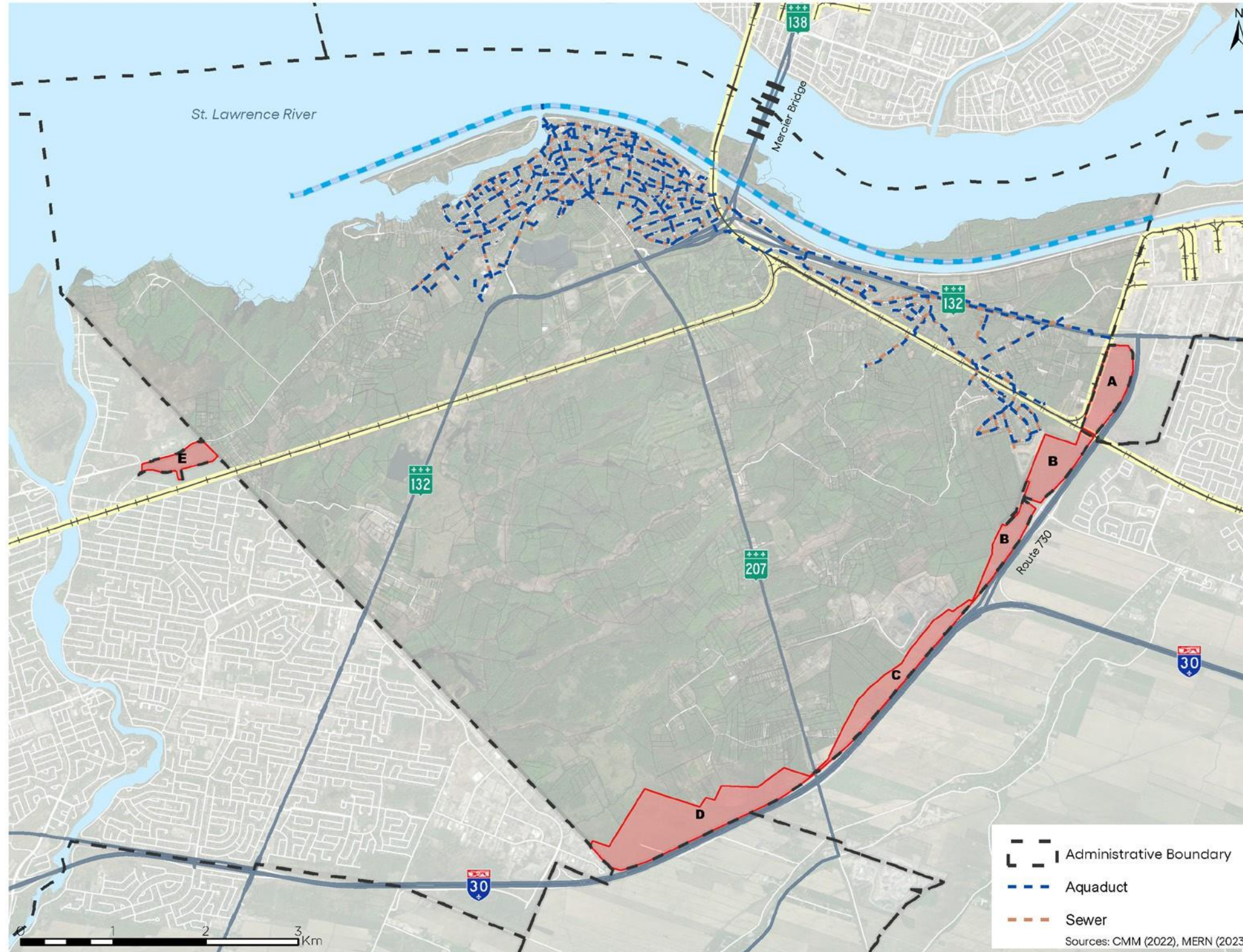
Lot 106

The MCK is currently planning the relocation of the community's Blue-Collar Park (public works yard). Currently located on River Road near the foot of the Mercier Bridge, the department of Public Works has outgrown its facility. The site initially identified for the new development is located in the Clay Mountains area of the community, adjacent to the Saint Lawrence Seaway (Mohawk Council of Kahnawà:ke, 2019), although alternative siting options have been proposed to the MCK, due to the high development potential of the initial site. Although this project is far from completion, it is noted here as a project with the potential to transform the community in the coming years.

Although this selection of current projects and opportunities give some sense of potential future development directions for the community, they are far from a comprehensive forecast; more information is needed to draw useful conclusions.

INFRASTRUCTURE

Location of parcels A to E in relation to existing rail, sewer, and water networks.



Kahnawà:ke Highway 30 lands represent a potential opportunity to develop an intermodal logistics hub or other industrial and commercial land uses. However, this would entail the need to connect the site to existing road, water, sewer, electrical, and rail in- infrastructure, as they are located at a distance from the Kahnawà:ke centre. This section summarizes the findings and recommendations of previous studies detailing the infrastructure needs in Kahnawà:ke in general as well as the feasibility of creating the connections previously mentioned for the purpose of developing the parcels. The reports cited date from before 2015; therefore, the recommendations must be validated with present-day information and cost estimates updated to account for inflation. Nonetheless, it is presented here to summarize conclusions reached previously as a starting point for future recommendations.

Roads and highways

Parcels A through D are bordered to the southeast by Highway 30. Parcel A is also bordered to the north by Route 132, and Route 207 meets Highway 30 at an existing highway entrance and exit between parcels C and D. Finally, parcel E can be accessed via Old Chateauguay Road.

Traffic volume

According to 2023 traffic counts from the MTQ, Highway 30 is busiest between Chateauguay and Saint-Constant (parcels C and D), with daily average traffic counts of 56,000 vehicles. This number has steadily increased since traffic counts began in 1992. Between Saint-Constant and Sainte-Catherine (parcels A and B), traffic flow decreased to an average of 17,100 to 26,000 vehicles, depending on the segment. Traffic flow has also increased significantly since the early 1990s in this zone but has remained fairly constant for about 15 years (Gouvernement du Québec, 2024b).

In Kahnawà:ke, daily average traffic counts on Routes 132 and 138 have decreased slightly since counting began some 20-25 years ago. Between Chateauguay and the intersection with Route 207, the daily average traffic count in 2023 was 39,000, having decreased steadily since its peak at 46,000 in 1993. Between the intersections with Route 207 and Highway 30, average daily traffic counts in 2023 ranged from 29,000 to 41,000 vehicles depending on the segment. The latter counts have varied slightly over the years but do not show a clearly increasing or decreasing trend (Gouvernement du Québec, 2024b). Finally, traffic counts for route 207 show a daily average of 8,600 vehicles in 2023. In 1995, this number was 3,900 and the growth rate has been relatively steady in the intervening years (Gouvernement du Québec, 2024b).

Although traffic counts show slight decreases in traffic on certain roads, they do not account for the types of vehicles using the road. According to residents, the construction of the Host Hotel and Harnois truck stop at the edge of the community on Route 132 increased the amount of trucking traffic in the area, which likely entailed an increase in noise, pollution, and congestion along the road. It is thus important to understand that, although the absolute number of vehicles using community roads may have decreased, this does not necessarily imply a corresponding change in community perceptions of traffic.

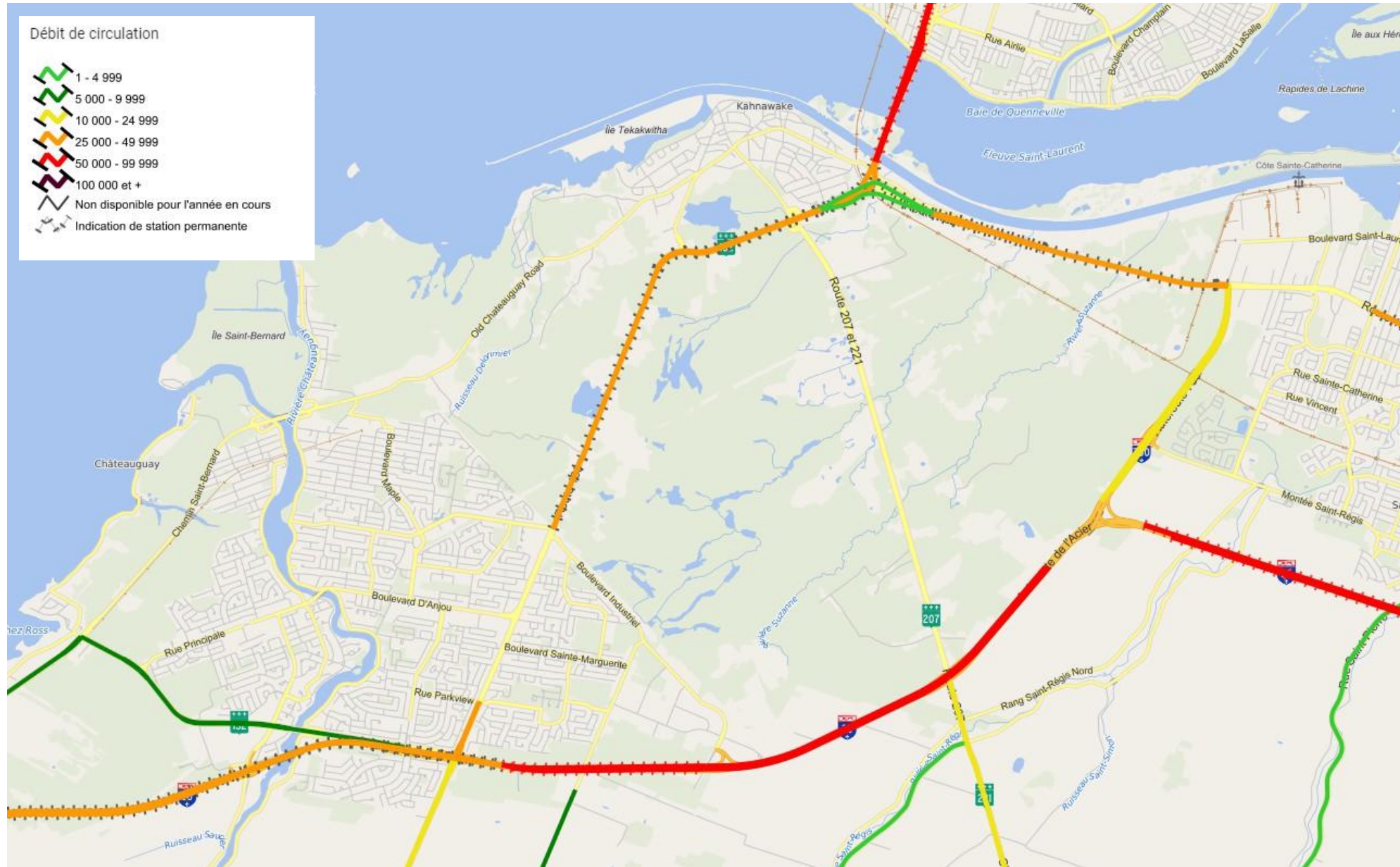
Overall, it can be surmised that traffic in the region has increased in a non-uniform way in the region over the last several decades. The most likely cause of this increase in traffic volume is the growth and development of the municipalities of Roussillon adjacent to Kahnawà:ke. The effects of growing traffic volume, including congestion, air quality implications, and noise, should be considered in future development proposals.

Access considerations

Route 207 is one of a few roads that connects the community core in the northern sector of Kahnawà:ke to Highway 30. As of 2015, trucking is prohibited on Route 207, and the regional road does not have the capacity, nor the safety features required to accommodate an increased flow of traffic from a new industrial hub or other development on the returned lands. Despite the prohibition of trucking, trucks still use Route 207 to access the JFK quarry from Highway 30 (C. Stacey, personal communication, July 26, 2024). WSP provided recommendations for the improvement of the road's design, including resurfacing and widening; altogether, the estimated cost of these improvements in 2015 was \$18.8 million (WSP, 2015). Negotiations with the MTQ and federal government to fund these improvements are ongoing (C. Stacey, personal communication, July 26, 2024).



Visualization of traffic volume on provincial highways



Additionally, a 2013 feasibility study by the MTQ looked at four options for the creation of new access points to Highway 30 from the returned lands:

- › Option 1: Create a new exit on parcel C – \$22,050,000
- › Option 2: Modify the Montée Saint-Régis interchange (between parcels B and C) – \$4,200,000
- › Option 3: Convert an existing agricultural overpass on parcel D - \$15,625,000
- › Option 4: Create an interchange on Route 207 (divides parcels C and D) – \$1,475,000

The study weighed the advantages and disadvantages of each scenario but did not provide a recommendation, concluding that all four options are possible but not justified due to their various constraints and because none comply with the MTQ’s standards for distances between interchanges. However, it is noted that options 2 and 4 are the least costly and most feasible (Ministère des Transports du Québec, 2013). Despite this, there is sustained interest on the part of the MCK to advance option 4 (C. Stacey, personal communication, July 26, 2024). These options and their pertinence to each parcel are discussed further in section 4.

As of 2024, preliminary planning for the reconfiguration of the junction of Route 207 and Highway 30 (option 4 in the 2013 MTQ report) had begun but was paused. The need to expropriate agricultural land on the Saint-Rémi side of the junction, a lengthy process, poses a challenge, as agricultural lands are protected by the *Commission de protection du territoire agricole du Québec* (CPTAQ) (B. Morris, personal communication, March 19, 2024).

On another note, the 2014/2015 studies for an intermodal hub on the Highway 30 lands recommended the development of an access road parallel to Highway 30. A similar service road could be an access option for any future development of the parcels, not only a logistics hub. In 2014, the cost of this road was estimated at \$7.2 million (Demers Beaulne, 2014).

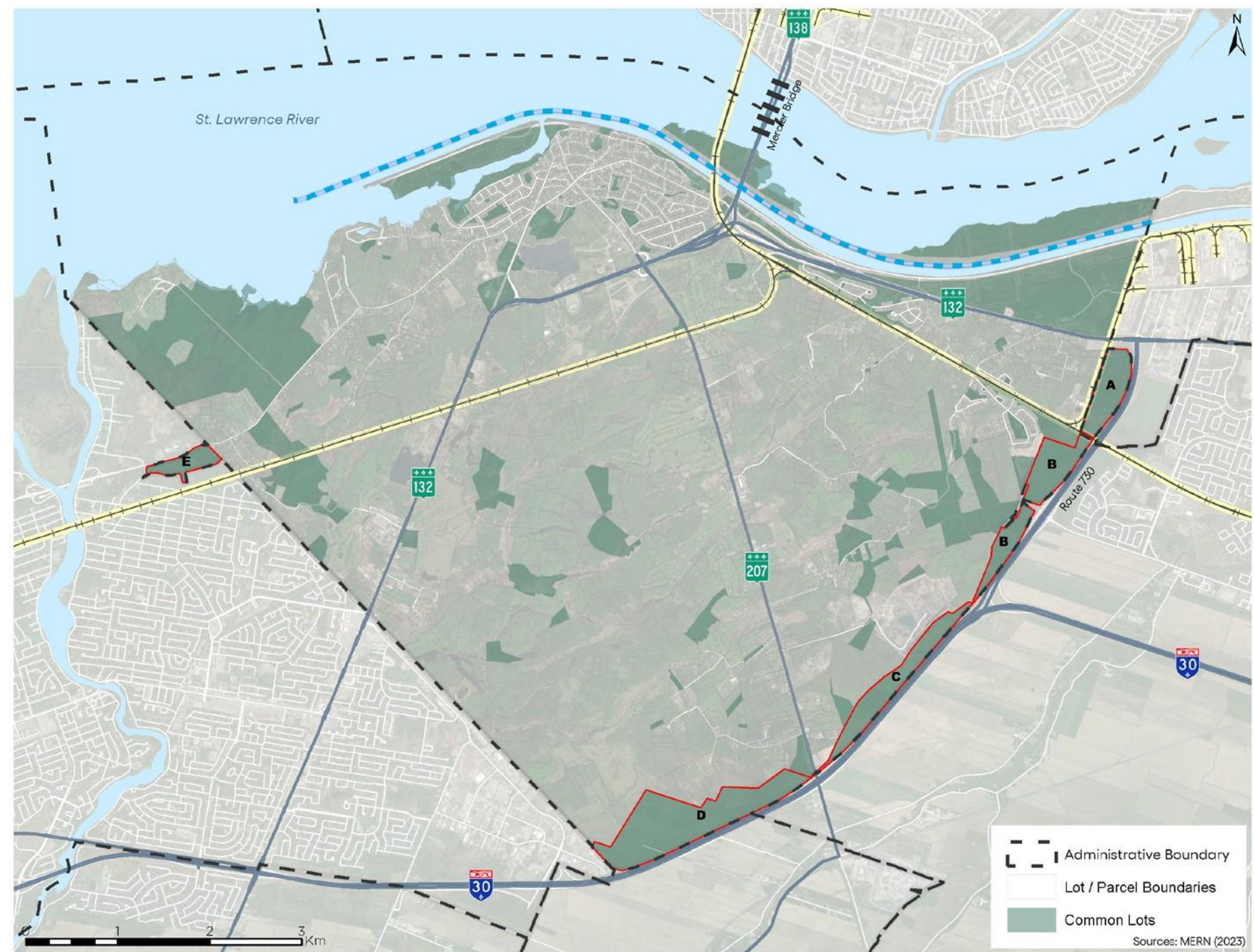
In terms of road access to the lands from within the community, this is dictated in large part by the location of common lands (see next figure). In the case of private lands (owned by individual community members), the owner must give permission for an access right-of-way; the necessary territory cannot be expropriated.

This information at least provides a basis for future conversations with project stakeholders about access possibilities. More information about the proposed land uses for the parcels would be required to validate any plans for access to the parcels.

Public transportation

Exo bus 98 connects the Montreal Angrignon metro station to Kahnawà:ke, running along River Road and Old Malone Highway. Additional Exo bus routes traverse the community on Route 132 to serve the communities of Chateauguay and Sainte-Catherine. The Exo Cadiac commuter train also passes through Kahnawà:ke to reach Sainte-Catherine station, located near parcels A and B. Finally, the new Réseau Express Métropolitain (REM) light rail network connects the nearby city of Brossard and other south shore communities to downtown Montreal via the Champlain Bridge. However, the returned parcels themselves are currently underserved by the existing public transportation network.

Common lots in Kahnawà:ke.



Freight rail network

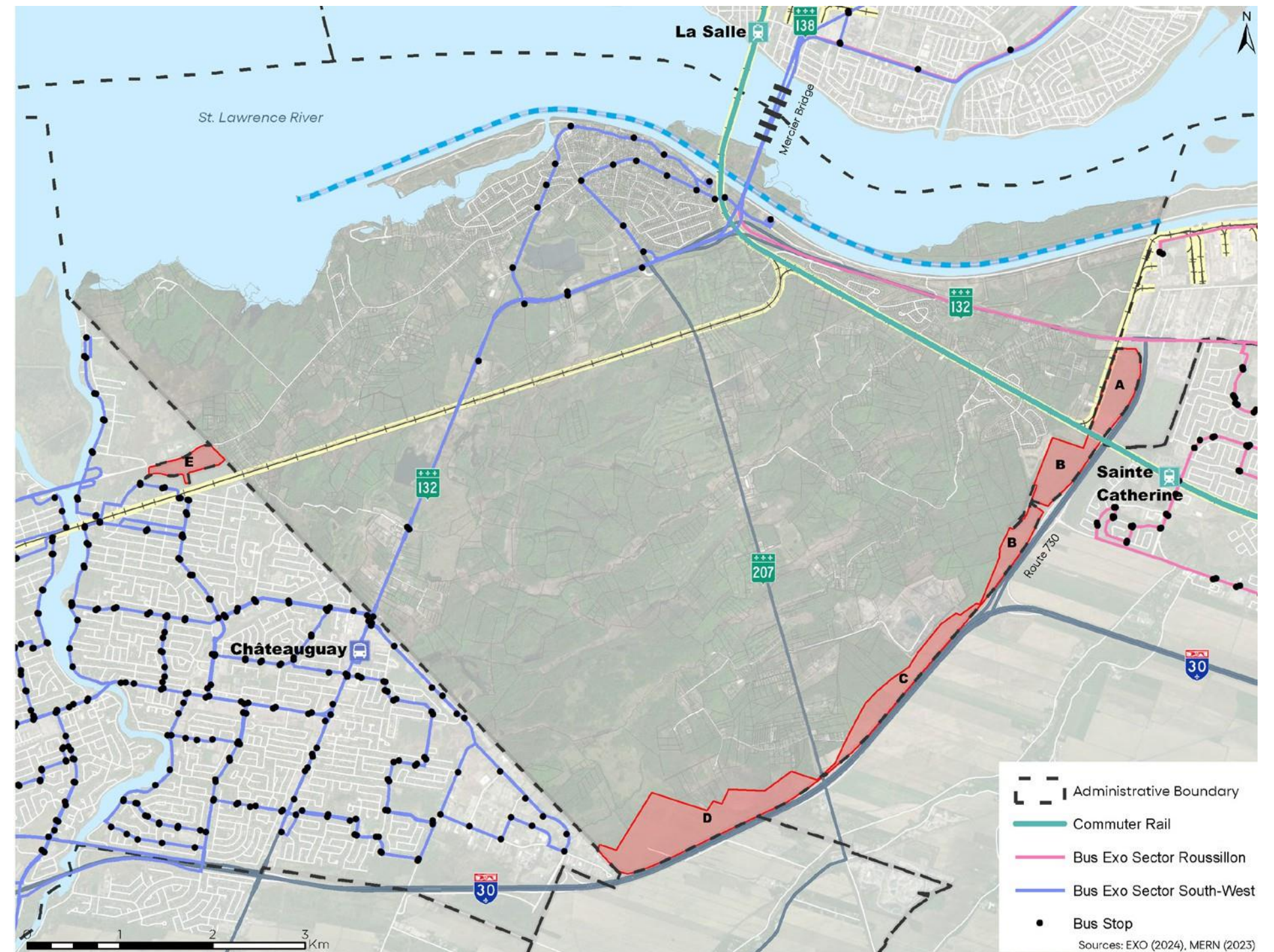
Currently, the Canadian Pacific Kansas City Railway network passes through the urban core of Kahnawà:ke, connecting to Montreal and Sainte-Catherine. Heading towards Sainte-Catherine, it passes between parcels A and B. Previously, the rail tracks forked near the community core and also connected to Chateauguay near parcel E, but the tracks have been removed (Google Maps, 2020a). The current rail tracks do not service parcels C and D. See Figure for a visualization of the current network.

The construction of a railway segment servicing an intermodal hub on the Highway 30 lands was costed at between \$11 million and \$20 million by EXP and Demers Beaulne in the mid-2010s (Demers Beaulne, 2014, 2015; EXP Services Inc., 2015). A more detailed proposal using updated costs would be required to truly understand the feasibility of this proposal in 2024.

Water and sewer services

As illustrated in the adjacent Figure, the returned lands are not served by the current community service networks; some amount of expansion would be required to develop the lands. However, the precise extent of the expansion needed is dependent on the uses proposed for the site (Demers Beaulne, 2013, 2015; EXP Services Inc., 2015; WSP, 2015). It is important to consider that the expansion of the networks would likely entail more than the simple construction of water mains and sewer lines, pumping stations, and other measures to increase capacity that may be needed, depending on the proposal. However, according to the Capital Unit, there are no major capacity concerns regarding the future expansion of the network (C. Stacey, personal communication, July 26, 2024).

Public transportation routes surrounding the returned lands.



In the early 2010s, a study was commissioned by Tewatohni'saktha to evaluate the expansion of civil infrastructure and utility lines along Route 207 to increase coverage across the community. This study assessed infrastructure needs in light of potential development of the Highway 30 lands for industrial uses. The report highlighted that over 18 million square feet of the lands did not have water access at the time of the study and stated that installing the proper connections to municipal services would increase the value of the lands (Demers Beaulne, 2013). As of 2024, the installation of water and sewer services under Route 207 is still planned in order to connect southern residents to these systems. This project is contingent on the negotiations mentioned in section 3.5.1 (C. Stacey, personal communication, July 26, 2024).

In the final report for the road and infrastructure work on Route 207 conducted by WSP, it was stated that the aqueduct system is currently insufficient to support development along Highway 30. A tank with a booster would need to be provided to ensure adequate water for fire protection. Additionally, the sanitary sewer network would need to be expanded, ideally with a pumping station to divert wastewater from the Route 207 network. Finally, the existing water treatment plan should be expanded or a supplementary one constructed to fulfill the needs of the new developments (WSP, 2015). WSP estimated the cost of these improvements at \$7.8 million in 2015.

There may be opportunities to share municipal services with neighbouring municipalities, such as Chateauguay and Sainte-Catherine, but this will require more research. Currently, it is unclear whether these municipalities would have the capacity, but barring technical issues, they would be required, by jurisprudence, to share (B. Morris, personal communication, March 19, 2024).

Photo of the Kahnawà:ke Water Filtration Plant



(taken by the project team, 2024)

Energy

Currently, the returned lands are not serviced by the community's electrical system. Creating these connections would be necessary should any development take place on the parcels. However, much like the other infrastructure considerations, the feasibility is highly dependent on costs and will be dictated largely by the specific proposal. There may be opportunities to share electrical capacity with neighbouring municipalities, but this requires more research.

Efforts were made to obtain information on current consumption levels and the capacity of Kahnawà:ke's existing electrical system from Hydro-Quebec; however, a response had not been received at the time of writing. The MCK's Capital Unit is also in the process of trying to obtain this information from Hydro-Quebec (C. Stacey, personal communication, July 26, 2024). This will be essential for future planning stages.

Telecommunications

Kahnawà:ke has a variety of telecommunication options through local and non-local internet, cable, broadcasting, and cellular service providers. In 2021, Kahnawà:ke received \$5M to bring high-speed internet to the Mohawk community through a collaborative investment of the provincial and federal governments. The total fund was a \$94-million investment with the goal to bring high-speed internet to 18,000 homes in Quebec by September 2022 with a focus on remote areas and Indigenous communities (Grant, 2021).

Cellular tower radius coverage varies from low-, mid-, and high-band. Low-band cellular towers are typically used in rural, suburban, and urban areas and have wide coverage with low capacity. Mid-band are more present in suburban and urban areas with moderate coverage and medium capacity, whereas high-band towers are used in dense urban areas and offer limited coverage with high capacity (Simmons, 2024).

Parcel C has Rogers, TELUS and Videotron communication towers that offer a low to mid-band coverage radius. Parcel A is also in close proximity to similar tower frequencies provided by a TELUS communication tower north of Highway 132 in Kahnawà:ke and a Rogers and Videotron tower in Sainte-Catherine with the same low- and mid-band. Parcel E is in proximity to Chateauguay towers that offer low- to mid-band coverage as well.

With the advancement and increase in cellular devices and the increasing demand for high-bandwidth applications and higher-quality service, as well as development interfering with signals, the radius of cell towers is being impacted (Simmons, 2024). Therefore, further studies will need to be carried out to determine future telecommunication needs to accommodate the returned lands if any future development takes place.

ENVIRONMENTAL PORTRAIT

Ecosystems and wildlife

Several ecosystems in Kahnawà:ke have been identified and studied by KEPO, and many are home to at-risk plant and animal species. Notably, about 20% of the territory of the community is covered by wetland ecosystems, rich natural areas that “provide habitats where many bird, reptile, amphibian, mammal, and fish species live, feed and reproduce”, as well as providing fertile ground for many species of medicinal plants (Kahnawà:ke Environment Protection Office, 2024). More detailed information on traditional medicine plants found on the parcels is forthcoming. Important species, some of which are at risk of endangerment, that can be found in Kahnawà:ke include the bald eagle, Caspian tern, snapping turtle, painted turtle, monarch butterfly, swamp white oak, butternut, wild leek, and many more (Kahnawà:ke Environment Protection Office, 2024).

The returned lands are home to many species and ecosystems. Important areas of parcels A, B, C, and D contain wetlands, with parcel B being almost entirely covered. A creek also runs through parcel B. KEPO has classified the wetlands present on the returned parcels along Highway 30 as marsh and swamp, with small creeks present as well. According to KEPO, there is also a swamp present on parcel E, adjacent to Chateauguay (Kahnawà:ke Environment Protection Office, 2024). The parcels are also characterized by a diversity of ground cover, including forest, shrubland, and current and former agricultural lands and fields. The ground cover of Kahnawà:ke is illustrated in adjacent Figures.

Finally, in 2009, the MTQ conducted surveys of the Highway 30 and Chateauguay parcels to determine the presence of endangered plant and animal species. The Special-Status Flora study found eight species of note, including two with legal status: wild leek (vulnerable in Québec), butternut (endangered in Canada), shagbark hickory, common hackberry, suborbicular hawthorn, villous wild rye, meadow evening primrose, and northern watermeal. An additional six precarious species were found on the lands.

The study also noted that in the Montérégie region, wooded environments are relatively rare, and wetlands are “subject to constant developmental pressure”, indicating the importance of the preservation of these areas (Chabot & Claude, 2009, p. 7). The inventory of special-status fauna, on the other hand, did not find the presence of endangered species on the lands. However, it did note the presence of the Great Egret, a species of interest, in the marshes of parcel A and the value of the mature swamps and silver maple groves (GENIVAR, 2009).

Photo of the Canada Bald Eagle



(Wildlife Species Canada, 2019)

Medicines

Medicinal plants used by the Kanien'kehá:ka people can be found throughout the territory of Kahnawà:ke. Generally, the locations of various medicines are known by Kahnawà:ke knowledge keepers, some of whom were interviewed for this study. They indicated that while medicines do not grow in wetlands, they often grow in the surrounding areas. It is, therefore, likely that a variety of medicines are present on the returned parcels; however, the precise species and their locations are currently unknown. They also noted that some plants can be moved by digging them up at the root.

The knowledge keepers made the following recommendations concerning medicines on the returned lands:

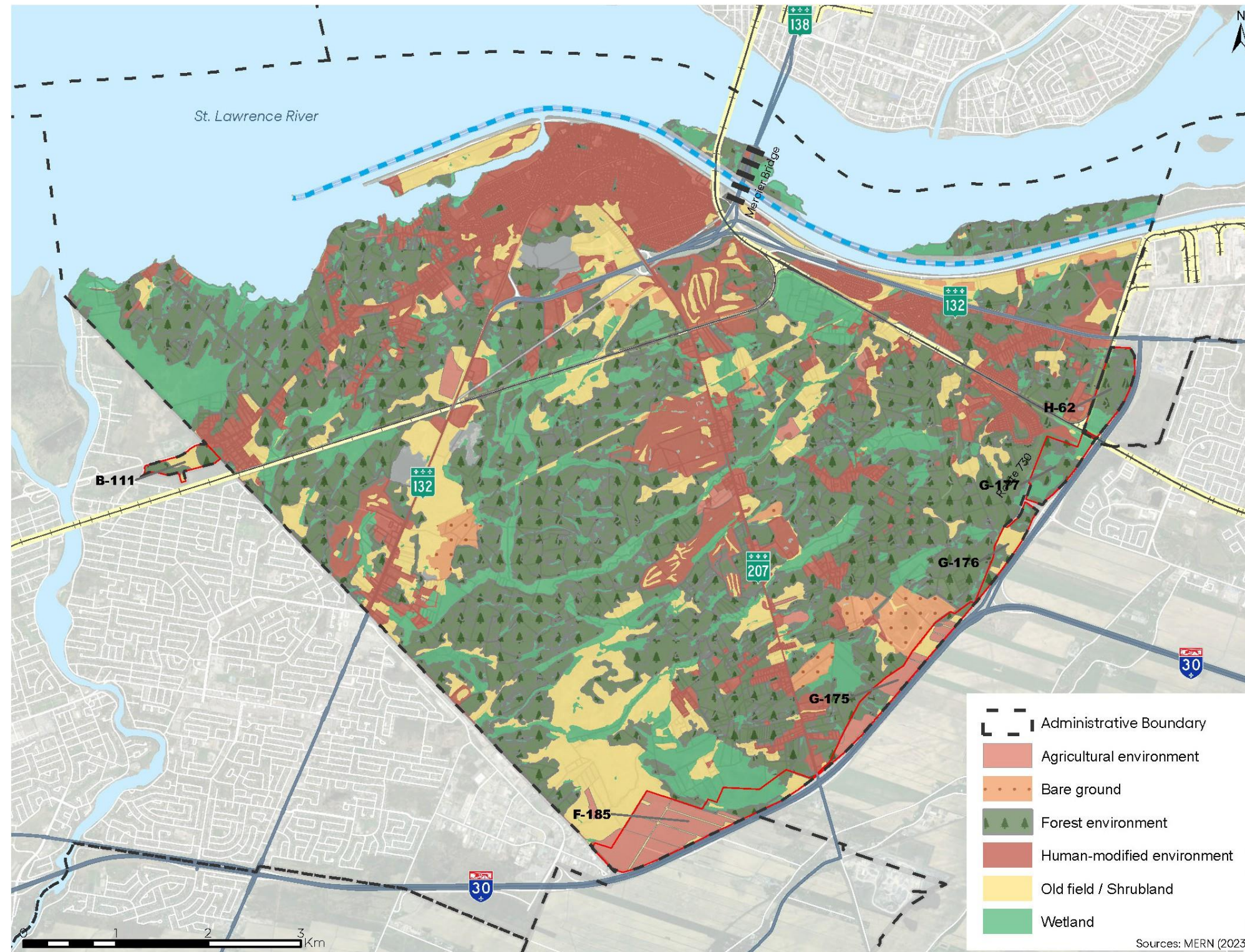
- › Conduct a guided walk-through to identify existing medicines and their locations thoroughly
- › Develop a comprehensive community document to identify and protect natural medicines for community use on public lands
- › Test soils surrounding locations of medicines for pollutants and pesticides and determine how long they remain in the soil

Photo of Burdock root, which was traditionally used as a medicinal blood cleanser.



(Deer, 2018a)

Ground cover typology for Kahnawà:ke



(Ministère des Ressources naturelles et des Forêts, 2023).

Soil quality

Preliminary soil characterization was carried out in two phases for the MTQ prior to the return of the Highway 30 lands. The Chateauguay lands (parcel E) have never been studied for contamination.

Phase I characterization

Phase I soil characterization was conducted by Quéformat in 2008 in order to identify possible sources of contamination on parcels A, B, C, and D for in-depth testing. This was done through documentary research, interview research, and a site visit; no sampling of soils was done. The study found “the possible presence of fill materials of unknown origin on [parcel B (south), parcel C] and [parcel A],” which could potentially be contaminated. It also identified the Hurricane Gas Station (at the intersection of Highway 30 and Route 207) and the JFK Quarry as potential sources of soil contamination (Quéformat, 2008, p. 25). On the basis of these findings, parcels A, B (south), and C were recommended for more in-depth (phase II) testing, and parcels B (north) and D were assumed to be uncontaminated. The potential contamination of parcel E has never been studied.

Phase II testing

Phase II testing was subsequently carried out by Groupe Qualitas in 2012 and 2013. During this time, 90 soil samples were taken on parcels A, B (south), and C. The samples were taken 90 metres apart in a grid pattern, and a selection was tested for hydrocarbons, volatile organic compounds (VOCs), and metals. Three monitoring wells were also located in boreholes on parcel C to determine the presence of methane biogas and to monitor groundwater quality (Groupe Qualitas, 2013).

The limitations of the results of this round of testing are threefold:

- › 1. The samples selected for testing came only from parcels B (south) and C, as the study explicitly aimed to test backfilled areas for contamination. Therefore, although parcel A was sampled, the samples were not tested because the soil was determined not to have come from backfilling after the construction of the Highway 30 bypass, contrary to the phase I findings.

- › 2. Quebec’s *Ministère de l’Environnement, de la Lutte contre les changements climatiques, de la Faune et des Parcs* (MELCCFP) recommends soil samples be taken much closer together – in a 25-by 25-metre grid – to ensure the accuracy of the results.
- › 3. The fact that testing was conducted over ten years ago also limits the extent to which the results can be considered true today.

For these reasons, it is important to understand that the results of this testing are preliminary in nature and that finer, updated testing should be conducted in order to gain a more complete understanding of the current state of the soils on the returned lands.

Contamination limit values and their implications for land use

Contamination limit values are established in the report on soil testing results from Groupe Qualitas and are based on norms established by the MELCCFP in the Soil Protection and Contaminated Sites Rehabilitation Policy, *Land protection and rehabilitation regulation, and Regulation respecting the burial of contaminated soils*. Their definitions and consequences for potential development are as follows:

- › **Value A:** background levels of pollutants only. Land with results in the Value A range is suitable for any use, including agriculture.
- › **Value B:** minor levels of pollutants (see Table for relevant limits). Land with results in the Value B range is suitable for any use except agriculture. Residential, institutional, and recreational uses are appropriate, in addition to heavier uses.
- › **Value C:** moderate levels of pollutants (see Table). Land with results in the Value C range is suitable for commercial, industrial, and some institutional uses. Residential use is not recommended without soil remediation efforts, nor are institutional uses such as schools, medical facilities, nursing homes, daycare facilities, or playgrounds. However, C-range land can be used for roads, sidewalks, bike paths, and parks.

- › **Value D:** heavy pollution. These lands are not suitable for any use and special measures must be taken in the disposal of any soil contaminated to such a high degree (Groupe Qualitas, 2013).

Summary of results

Only background levels of hydrocarbons and VOCs were found to be present in the tested samples. Furthermore, for the most part, metal concentrations were generally below Value A levels in the tested samples. However, samples from parcel B (south) contained some Value B and one Value C level of manganese and Value B level of copper. Notably, though, the Value C level manganese concentration reading was 1,060 mg/kg, barely above the limit value of 1,000mg/kg. This sample was re-tested and confirmed at the time. Additionally, testing of samples from parcel C returned Value B levels of manganese and cobalt (Butera, 2023; Groupe Qualitas, 2013).

Also of note is the presence of methane biogas detected in the monitoring wells along the northern boundary of Parcel C, which will require special consideration during the design process for any buildings to be developed. Specifically, focused sampling and, if necessary, a biogas mitigation strategy will need to be developed and implemented by a qualified professional, which could increase the timeframe for the design and construction of any potential project. This is to prevent possible methane infiltration into buildings (Butera, 2023; Groupe Qualitas, 2013).

The soil testing results are summarized in the following table:

Summary of soil testing results for the metals manganese (Mn), copper (Cu), and cobalt (Co)

VALUE	LIMIT (MG/KG)			APPROPRIATE LAND USE	HIGHEST DETECTED LEVEL					
	Mn	Cu	Co		Parcel A	Parcel B (N)	Parcel B (S)	Parcel C	Parcel D	Parcel E
A	770	40	15	Any	Not tested	Not tested			Not tested	Not tested
B	1,000	100	50	Any except agriculture	Not tested	Not tested		X	Not tested	Not tested
C	2,200	500	300	Commercial, industrial, some institutional	Not tested	Not tested	X		Not tested	Not tested
D	11,000	2,500	1,500	None	Not tested	Not tested			Not tested	Not tested

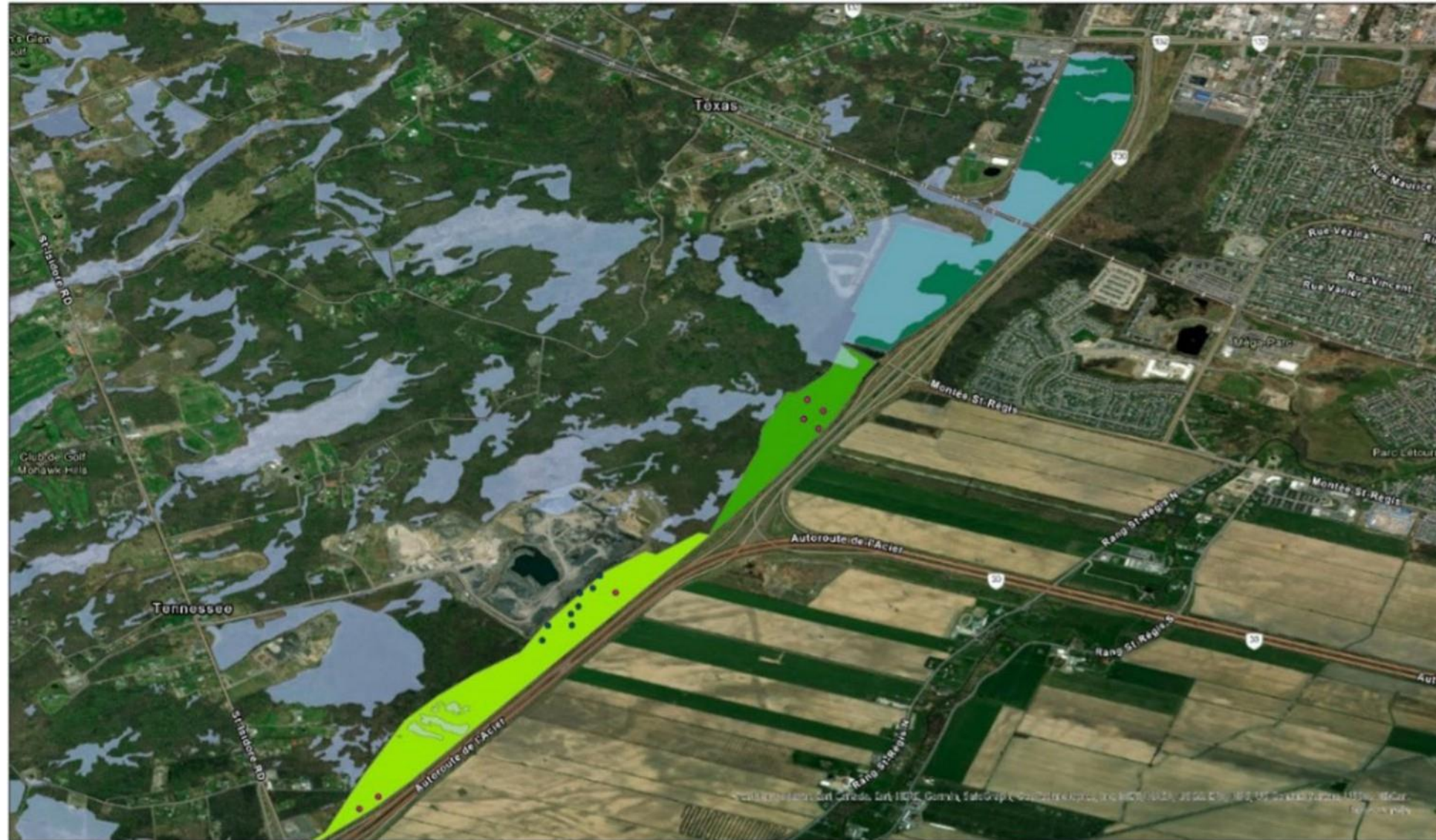
Source: (Groupe Qualitas, 2013)

Kahnawà:ke Environment Protection Office employees carrying out a soil quality test



Source: <https://kahnawakeenvironment.com/project/aquaticstewardshipprogram/>

Locations of biogas and soil exceedances in phase II testing



- Highway 30 Returned Lands
- Parcel D
- Parcel C
- Parcel B
- Parcel A
- Wetlands
- Biogas Exceedances
- Soil Exceedances

0 0.75 1.5 3 Kilometers



Source: (Groupe Qualitas, 2013)

Incidences of pollution since soil testing

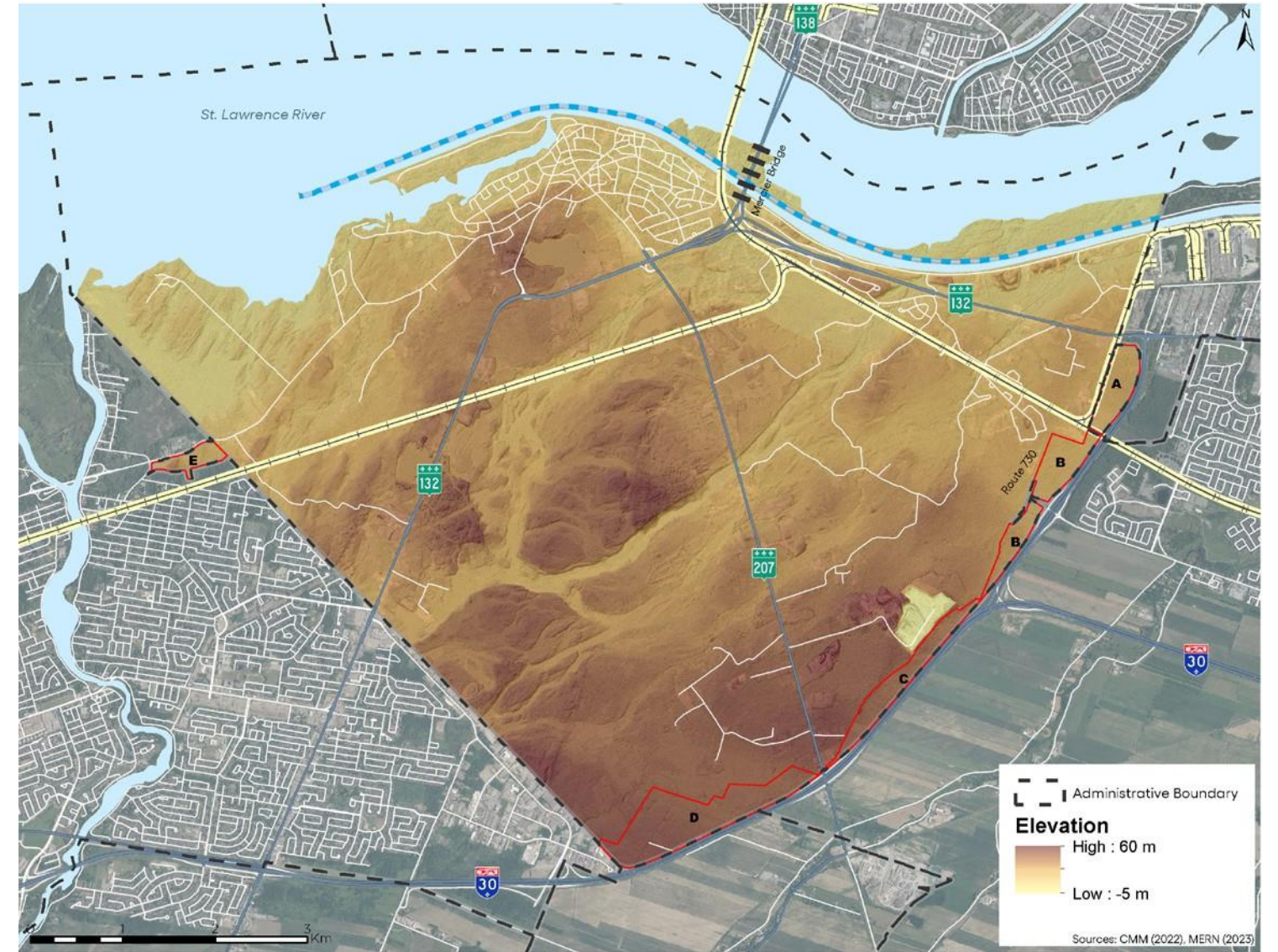
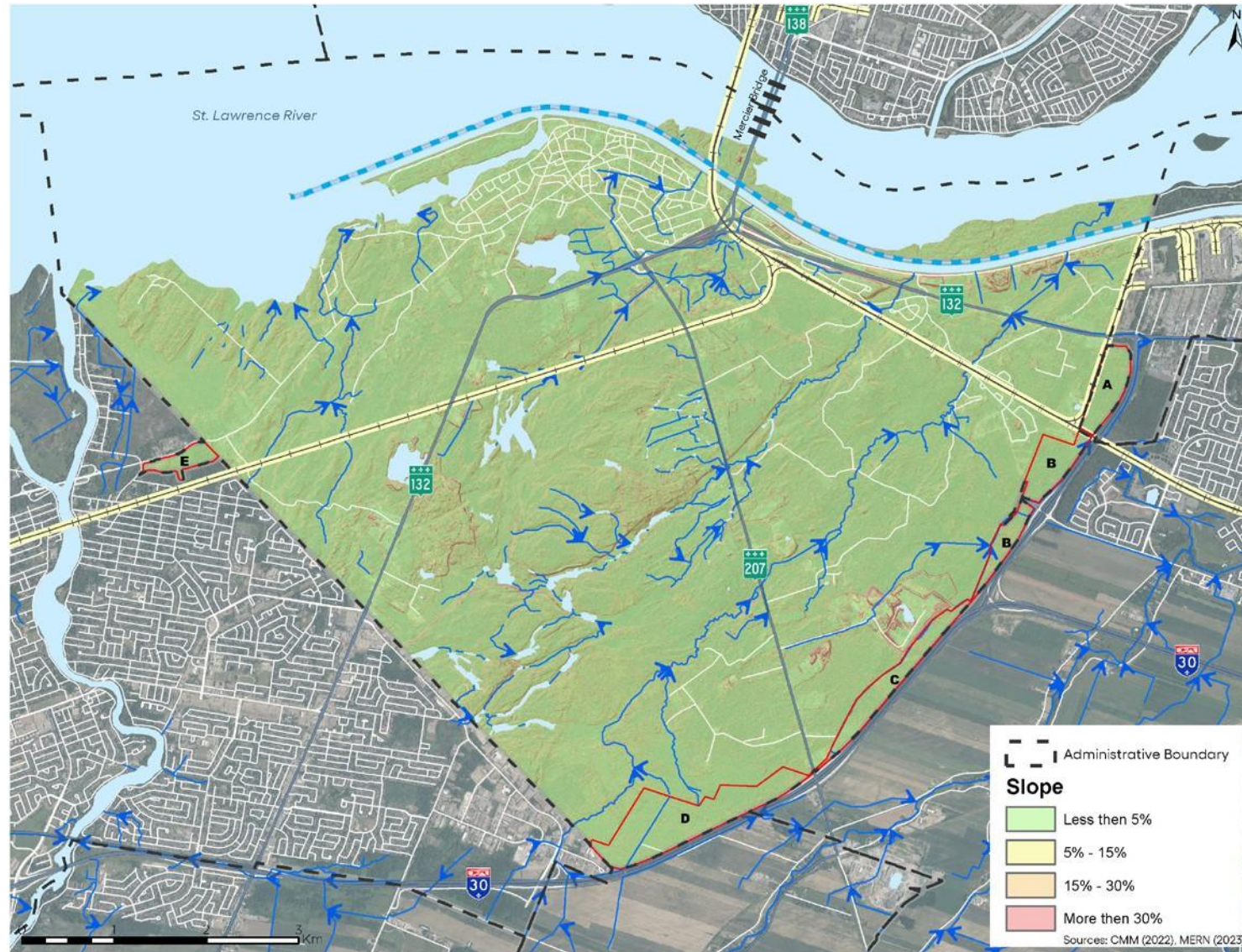
An industrial oil spill occurred on February 1, 2024, at a petroleum facility on Industrial Boulevard in Chateauguy, north of parcel D, resulting in an oil seepage onto Kahnawà:ke territory. Notably, traces of fossil fuels were found in the Suzanne River, and residents were temporarily displaced from their homes due to the presence of hydrocarbon fumes (Stevenson, 2024). This incident is notable not only because of its impact on the community, but also because it, and other occurrences like it, have the potential to invalidate previous soil quality testing results.

Industrial pollution is important to consider not only from an environmental perspective but also because it can influence public opinion on future local industrial and commercial development. However, the development of effective policies and procedures to deal with potential spills can help to mitigate such resistance.

Water quality

The phase II soil quality tests also tested groundwater in three wells on parcel C, near the JFK quarry. The analyses mostly found metal levels below the MELCCFP's potability criteria, with the exception of a few samples. They also found low levels of hydrocarbons in the wells, but no norms exist to determine the potability of groundwater with respect to hydrocarbons (Groupe Qualitas, 2013). Based on these findings, more research is needed to understand whether groundwater on the parcels could serve as a source of drinking water if the returned lands were to be designated with the purpose of using the groundwater for consumption.

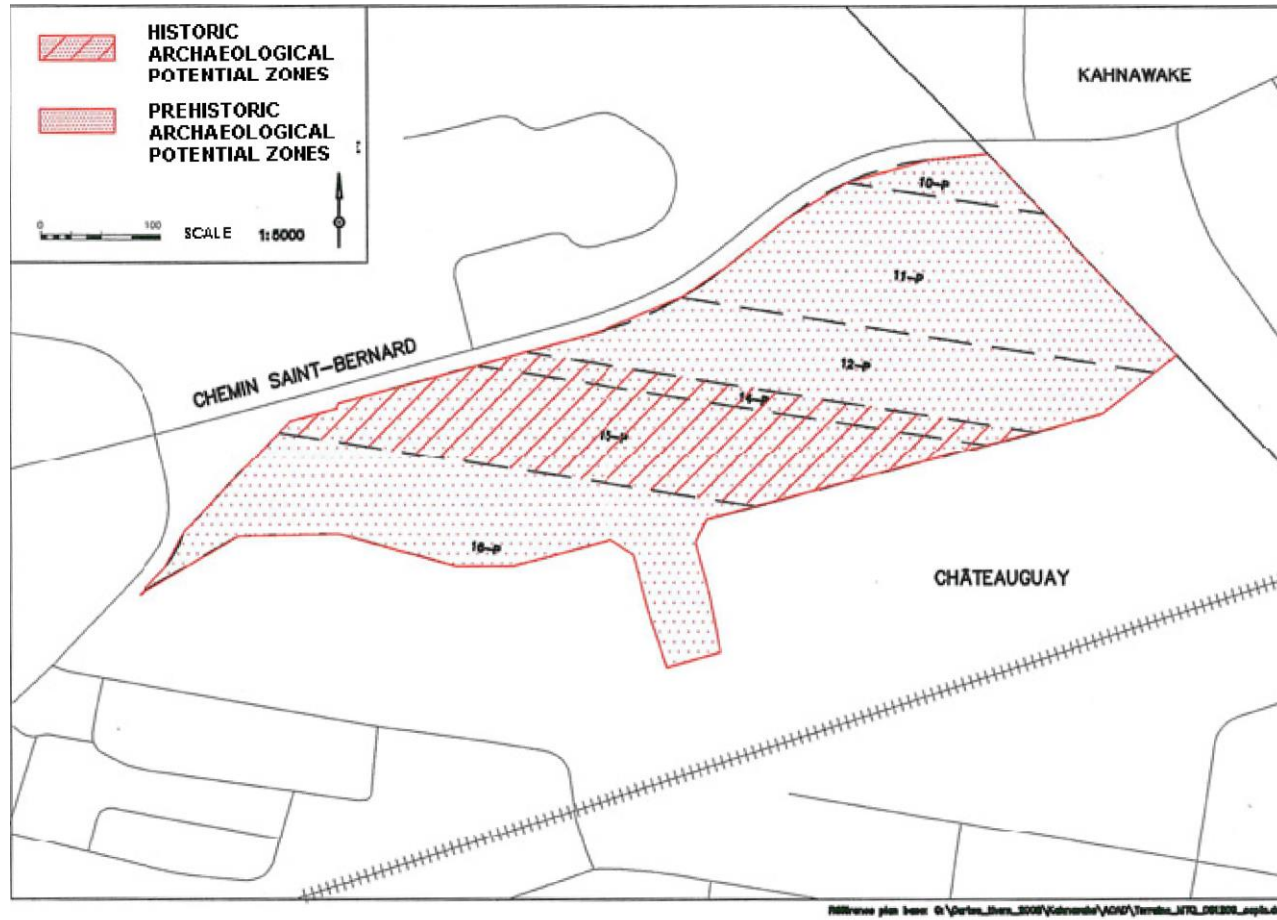
Slope (left) and elevation (right) of land in Kahnawà:ke.



Topography and Hydrology

Topographically, the land in Kahnawà:ke slopes down towards the Saint Lawrence River; the returned Highway 30 parcels are consequently situated at relatively high elevations. Parcel D is at the highest elevation, at approximately 60 metres, as it is furthest from the water, with the other parcels decreasing in elevation the closer they get to the river. Kahnawà:ke's landforms are relatively flat, with few instances of steep slopes. The returned lands are also quite flat. Considering the presence of extensive wetlands on the parcels, drainage could be an issue to consider when designating for the purposes of development.

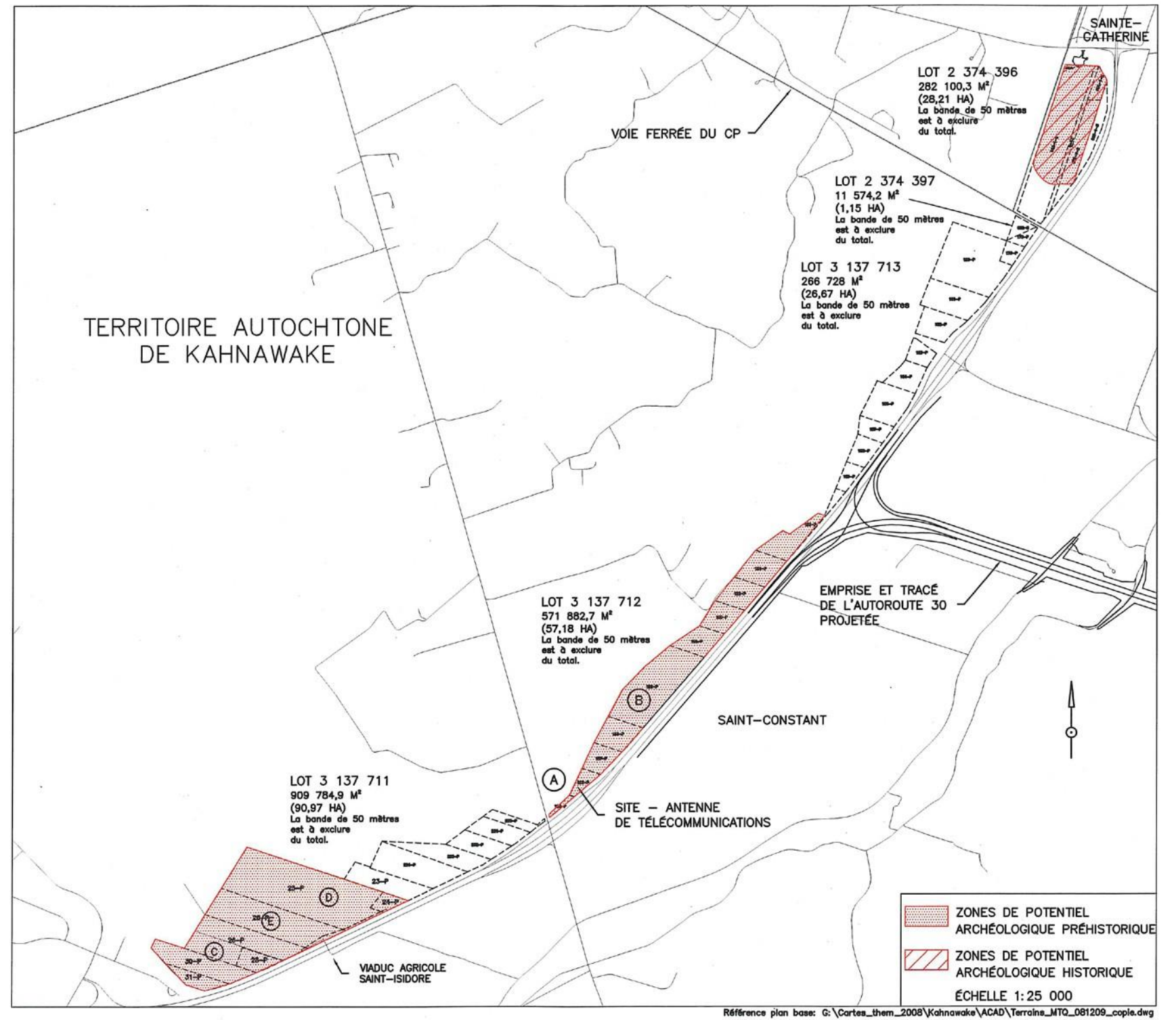
Archaeological potential of the returned Highway 30 and Chateauguy lands



Source: (Véronneau et al., 2009)

Archaeological sites

A 2009 archaeological potential study conducted for the MTQ created an inventory of known archaeological sites and used historical documentation to provide recommendations on the potential archaeological significance of the returned Highway 30 and Chateauguy lands. It found no known archaeological sites on the returned parcels. As for archaeological potential, a full survey of parcel E (Chateauguy) for both historic and prehistoric artifacts is recommended. It also recommended surveys of parts of parcels A, C, and D, primarily for prehistoric potential, but noted the possibility of more recent artifacts on parcel A (Véronneau et al., 2009). See Figure for details.



Référence plan base: G:\Cartes_them_2008\Kahnawake\ACAD\Terrains_MTO_081209_copie.dwg

Climate change

Climate change is affecting the entire community of Kahnawà:ke in various ways. KEPO is actively working on developing participatory and in- inclusive strategies to help Kahnawà:ke “to successfully mitigate, adapt and increase (its) resilience to its effects” (Kahnawà:ke Environment Protection Office, 2023), including the Kahnawà:ke Climate Change Plan (KCCP), adopted in 2019, and the leading of various workshops and activities.

The KCCP outlines the following anticipated climate hazards for Kahnawà:ke:

- › Higher average temperatures
- › Heat waves
- › Drought
- › Destructive storms
- › Heavy rainfall
- › River flooding

The returned lands, situated far from the shores of the Saint Lawrence and at higher elevations, are relatively safe from the effects of flooding. Additionally, the KCCP considers Kahnawà:ke’s wetlands to be important resources in combatting the effects of climate change due to the variety of ecosystem services they provide. These include “sequestering carbon, improving water quality and supply, absorbing floodwaters, providing habitat for wildlife and hosting many traditional medicines used by the community” (Mohawk Council of Kahnawà:ke, 2020, p. 79). Additionally, wetlands provide an important refuge for wildlife from high temperatures. The forested areas of Kahnawà:ke, also present throughout the returned lands, also increase the community’s resiliency by regulating storm flow and providing important resources.

SECTION 04

DESIGNATION POTENTIAL ANALYSIS



DEFINITIONS AND BEST PRACTICES

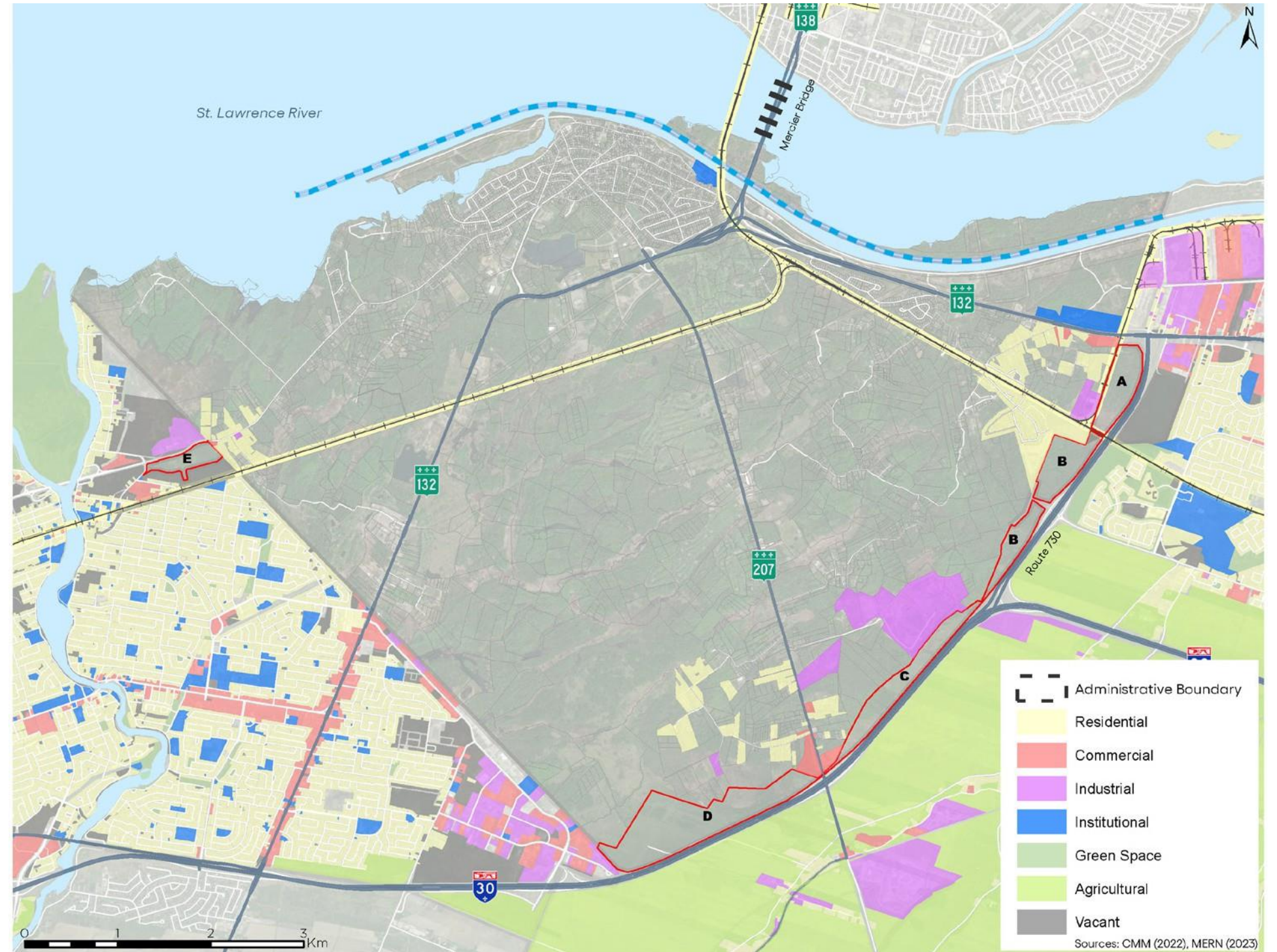
Overview of land use designations

The following definitions outline the types of activities generally permitted in each broad category of designation. These represent a baseline suggestion only and can be refined in the future to more accurately represent the vision of the community.

Definitions of proposed land use designations for the returned parcels

DESIGNATION	DESCRIPTION
Agriculture	<ul style="list-style-type: none"> Land can be used primarily for in-ground agriculture
Commercial	<ul style="list-style-type: none"> Land can be used to develop office space, retail space, entertainment, food service, etc. Commercial spaces can be used by community-owned businesses Commercial spaces can be leased to external parties and businesses
Conservation/ recreation	<ul style="list-style-type: none"> Land can be conserved in an undeveloped state to conserve existing ecosystems and medicinal plants Land can be used for traditional activities Natural areas can be used as parks, including the development of trail systems and other low-impact interventions to facilitate users' enjoyment
Industrial – Light	<ul style="list-style-type: none"> Land can be used to develop warehouses, distribution facilities, for manufacturing consumer goods, and/or rooftop agriculture Light industrial uses are often located within urban areas and produce the least pollution of any industrial use
Industrial – Medium to heavy	<ul style="list-style-type: none"> Land can be used for food processing, power generation, refining raw materials, and other high-environmental-impact activities Medium and heavy industrial uses are often significant generators of noise, air, and light pollution Medium and heavy industrial uses are not recommended for the returned lands
Institutional	<ul style="list-style-type: none"> Land can be used to develop community facilities, including fire and police stations, schools, libraries, indoor recreation facilities, and medical facilities
Mixed use	<ul style="list-style-type: none"> Land can be used for a form of development that is primarily residential, with a secondary focus on essential services in the same building(s) Mixed use often takes the form of mid-rise residential buildings above ground-floor commercial space
Residential	<ul style="list-style-type: none"> Land can be used to develop housing Restrictions on height, density, number of units, etc. are to be determined in a future stage

Established land uses in Kahnawà:ke and surrounding municipalities



Best practices for mixed-use designation

If planning mixed-use developments, it is essential to implement practices that ensure compatibility and minimize potential conflicts between uses. The compatibility of land use designations is assessed by evaluating the potential impacts and adverse effects resulting from their combination (Ontario Ministry of the Environment, Conservation and Parks, 2021). Derived from a synthesis of multiple land use compatibility reports, the following chart suggests a compatibility rating for the proposed land use designations. By cross-referencing two designations, the chart identifies their compatibility value and any required separation distances (Mansourihanis et al., 2023; Town of Union, 2018). For instance, a residential designation is fully compatible with a conservation/recreation designation, requiring no separation distance. Conversely, a residential designation is nearly incompatible with a light industrial designation, warranting a minimum separation distance of 20 meters and a preferred distance of 70 meters or more (Government of Ontario, 2021)(see Table).

This chart is, however, subject to limitations inherent in any form of generalization (Town of Union, 2018). Compatibility values will vary depending on the specific use of a designation. For example, the compatibility of an agricultural designation could be considered neutral or nearly incompatible depending on the nature of its operations and their scale (horticultural crops; raising livestock; agroforestry; maple syrup production; etc.) (Ontario Ministry of Agriculture, Food and Rural Affairs, 2016). Similarly, regarding institutional designations, a school is fully compatible with a residential designation, whereas a police station or a hospital might not be (Mansourihanis et al., 2023). Additionally, separation distances should be tailored to specific use cases. For instance, regarding light industrial designations, rooftop agriculture may require less separation than an electronics manufacturing facility. To fully mitigate the adverse effects of a specific use within a broader land use designation, a targeted compatibility study is recommended (Ontario Ministry of the Environment, Conservation and Parks, 2021).

Compatibility chart for the proposed land use designations

	AGRICULTURE	COMMERCIAL	CONSERVATION / RECREATION	INDUSTRIAL – LIGHT	INSTITUTIONAL	RESIDENTIAL
AGRICULTURE	4					
COMMERCIAL	1 to 2	4				
CONSERVATION / RECREATION	3	2	4			
INDUSTRIAL – LIGHT	4	2	1	4		
INSTITUTIONAL	1 to 2	3	4	1	4	
RESIDENTIAL	1 to 2	3	4	1	3	4

LEGEND	SEPARATION DISTANCE		
	COMPATIBILITY VALUE	RECOMMENDED MINIMUM	POTENTIAL INFLUENCE AREA
FULLY COMPATIBLE	4	None	None
NEARLY COMPATIBLE	3	None	None
NEUTRAL	2	None	None
NEARLY INCOMPATIBLE	1	20m	70m

DESIGNATION CONSTRAINTS

The table below summarizes the key designation constraints to consider for each parcel of the returned lands, which are outlined in the following paragraphs. It is assumed that whether or not there is potential development, there are constraints (access, infrastructure, wetlands, soil quality, archaeological potential) to consider for every designation.

Broadly, there is a reasonable or previously studied access option for all parcels except Parcel A and Parcel C. Some of these access scenarios require further study and discussion with the MTQ, and are not guaranteed to be feasible, but are a starting point when considering possible development scenarios.

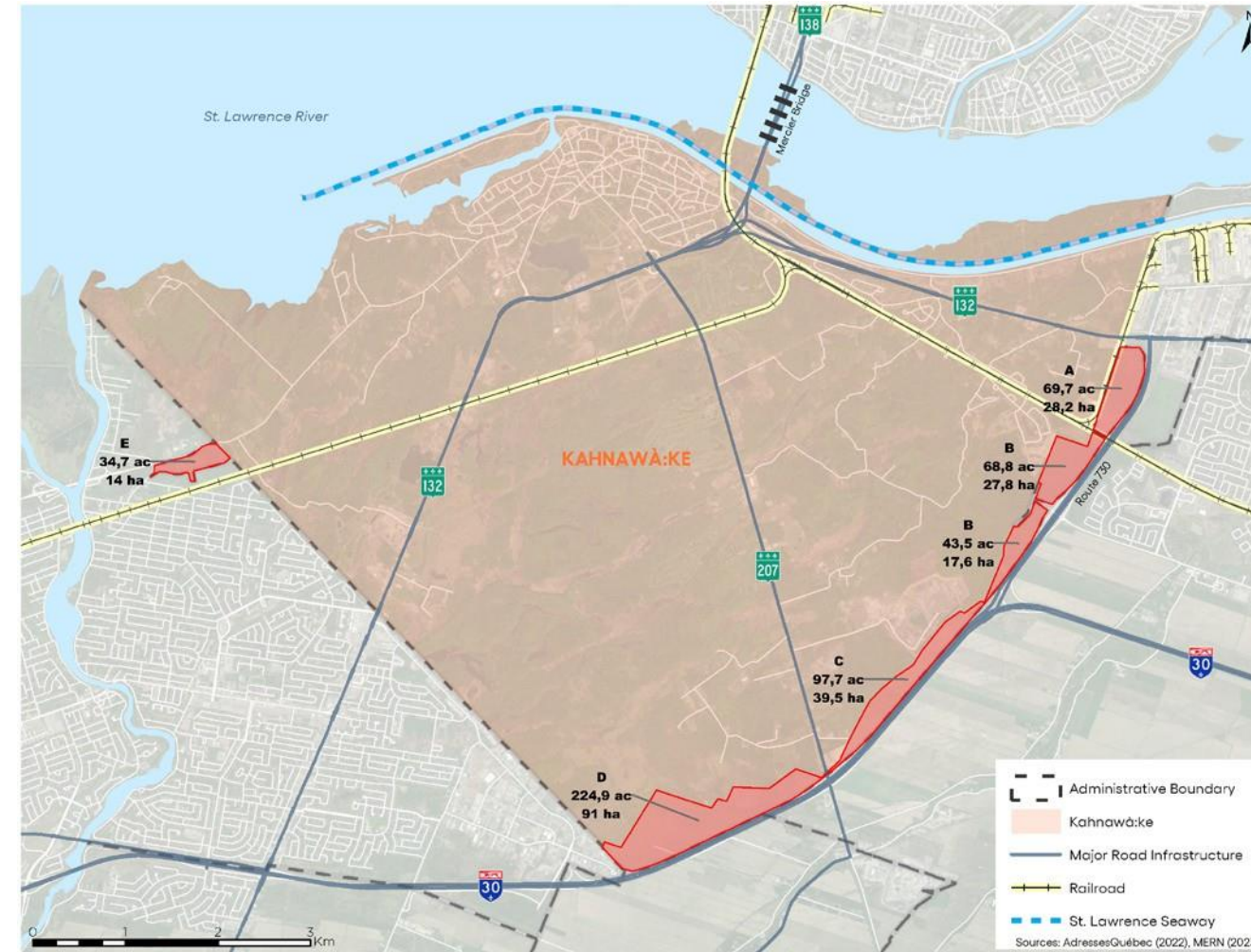
None of the parcels are connected to the current water and sewer networks. Parcel A and the northern portion of parcel B are located very close to the existing network, where building connections would likely be most feasible. Parcel E is very close to the existing Chateauguay networks; however, it is uncertain whether it will be possible to connect to them.

Wetlands cover significant swathes of land on parcels A, B (north), and D. The handling of development on and around wetland areas must be addressed in any future proposals. Additionally, more detailed analysis of the local ecosystems is required to ground truth the current data. However, wetlands are not necessarily a hindrance to all development on the parcels.

The soil quality test results from 2013 indicate that the soil on most parcels is acceptable for any use, including residential and agricultural uses. However, elevated levels of manganese and certain other elements on parcel C and the southern part of parcel B could constrain development on portions of those lands or require additional soil rehabilitation. Additionally, parcel E has not been tested, and more thorough testing is required to confirm and officialize the results.

Finally, the 2009 archaeological potential study recommended further study of portions of parcels A, C, D, and E, although there are no known archaeological sites found on the lands.

Location of each returned parcel and its total surface area



Summary of preliminary development constraints identified for each parcel

PARCEL	LOT #	CONSTRAINT				
		ACCESS	INFRASTRUCTURE	WETLANDS	SOIL QUALITY	ARCHAEOLOGICAL POTENTIAL
A	Lot 62 Block H	X	X	X		X
B (NORTH)	Lot 177 Block G		X	X		
B (SOUTH)	Lot 176 Block G		X		X	
C	Lot 175 Block G	X	X		X	X
D	Lot 185 Block F		X	X		X
E	Lot 111 Block B		X		Unknown	X

FEASIBILITY EVALUATION

The following feasibility evaluation has been developed based on the best practices for combining land uses discussed in section 4.1.2, as well as the constraints summarized in section 4.4. It is intended to systematically evaluate the feasibility of each potential land use on each parcel. As with the constraints, the feasibility evaluation summarized below is also broken down in more detail per parcel in Chapter 5.

Per the legend below, a use is generally considered “not at all suitable” for a given parcel if the soil has been found to be contaminated or if it would cause a conflict with its surroundings. A land use is considered “partially suitable or suitable with conditions” if it appears appropriate for the parcel in question, but further information is needed to make a full determination.

This table shows the suitability for each parcel, and which uses can be eliminated from consideration.

LEGEND

- Not at all suitable
- Partially suitable or suitable with conditions

Evaluation of the suitability of each potential land use on each parcel

PARCEL	AGRICULTURE	COMMERCIAL	CONSERVATION / RECREATION	INDUSTRIAL - LIGHT	INSTITUTIONAL	MIXED-USE	RESIDENTIAL
A							
B (NORTH)							
B (SOUTH)							
C							
D							
E							



SECTION 05

PARCEL-SCALE ANALYSIS AND RECOMMENDATIONS



This section outlines for each parcel the development constraints identified in the previous section, then proceeds to make recommendations for appropriate land use for each parcel. The analyses are formulated with respect to the findings resulting from the data analysis conducted in the previous sections and consider the regional factors and dynamics at play.

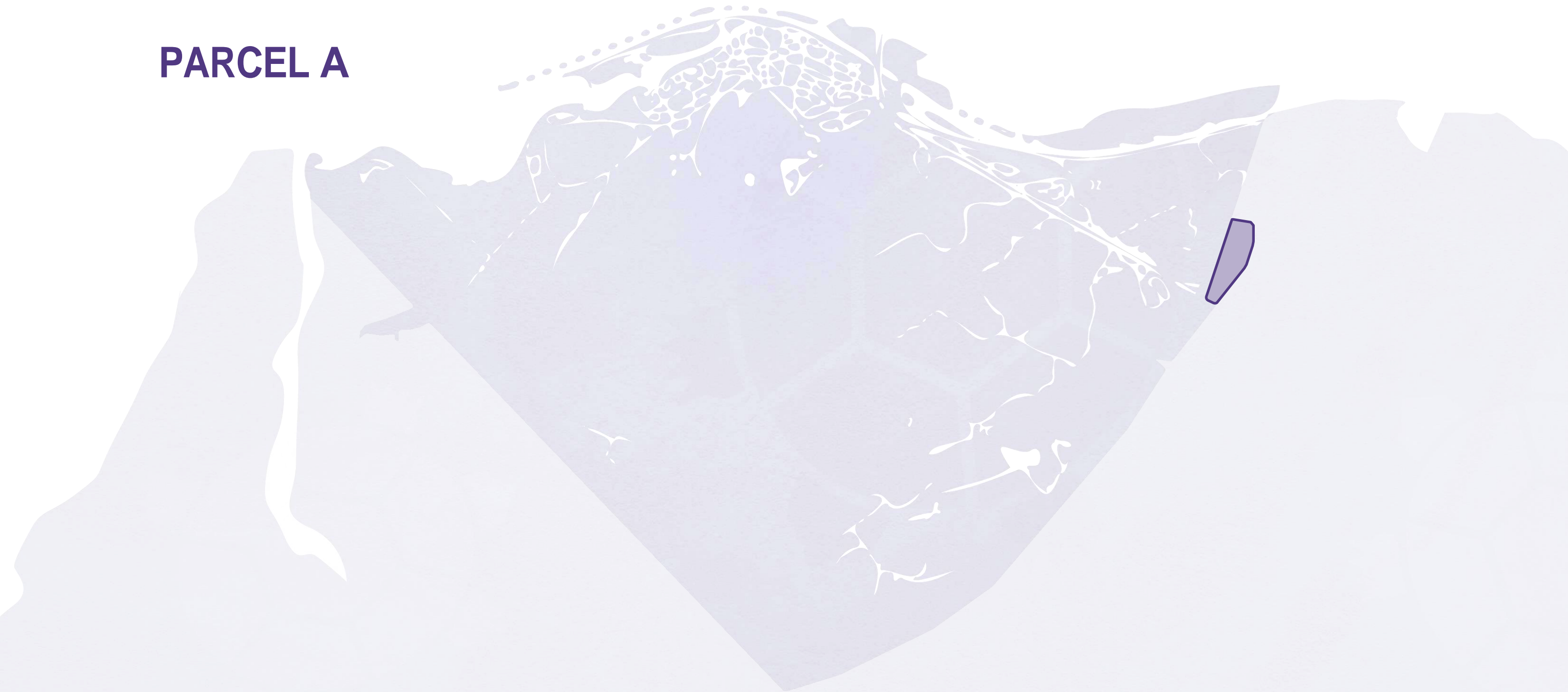
It is important to understand that the analyses in this chapter are made with imperfect information, and they could be subject to change based on new findings in the areas of:

- › Soil quality, particularly for parcel E, which has not been evaluated
- › Presence of medicinal plants
- › Archaeological potential
- › Development of access routes to the lands from existing community roads
- › Extension of water, sewer, and electrical infrastructure

Additionally, the lack of up-to-date information on the community's demographics hinders our ability to forecast long-term growth with precision and anticipate future community needs for infrastructure, housing, and services.



PARCEL A



PARCEL A

Development constraints

Parcel A, also known as Lot 62 Block H, is the northernmost Highway 30 parcel. Its center point is located at the coordinates 45,390412°N 73,607264° W. It has a surface area of 69.7 acres (28.2 hectares).

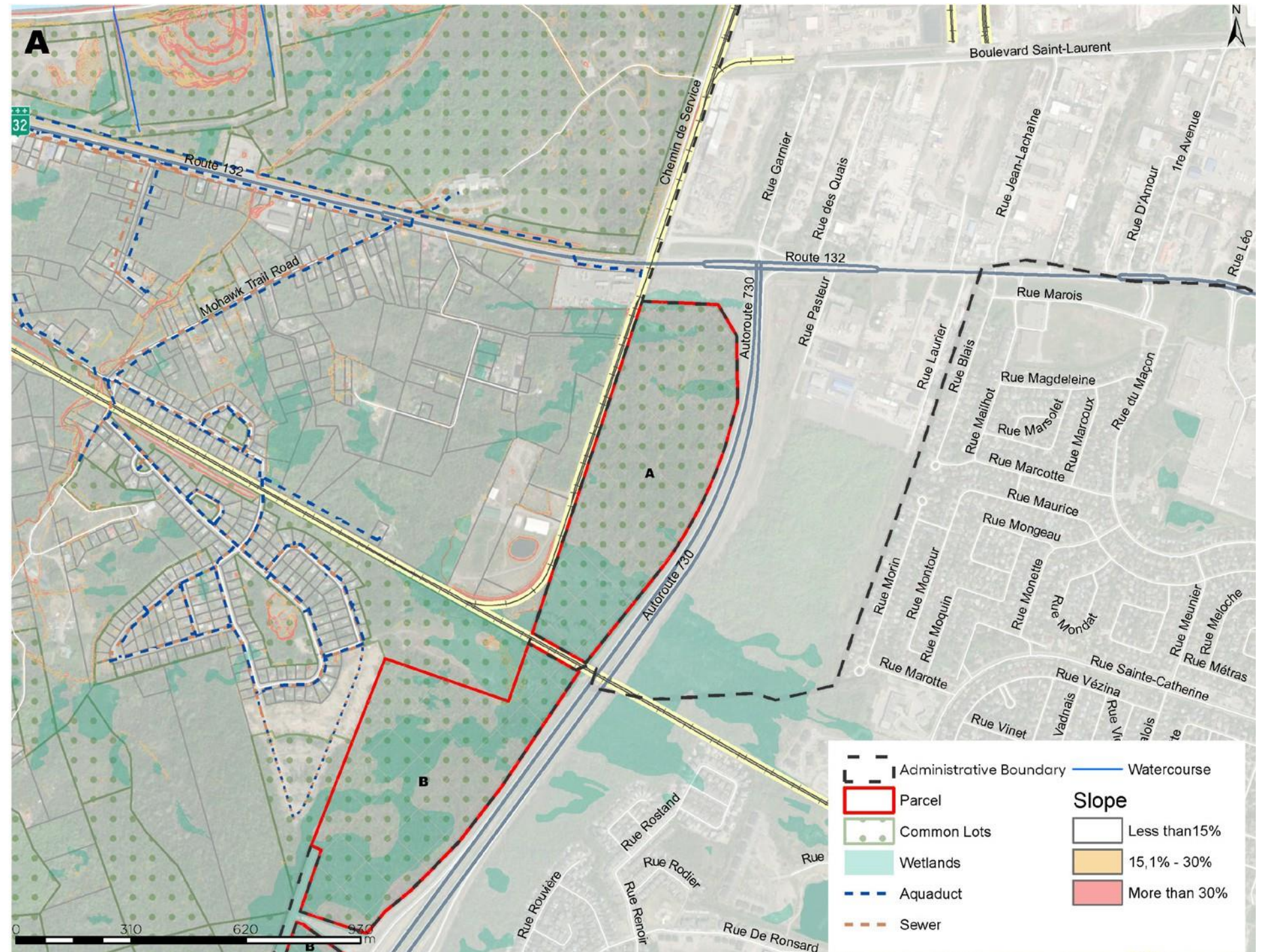
Preliminary development constraints identified for parcel A

LOT # Lot 62 Block H	CONSTRAINT
	A
ACCESS	X
INFRASTRUCTURE	X
WETLANDS	X
SOIL QUALITY	
ARCHAEOLOGICAL POTENTIAL	X

Surrounding uses

Parcel A is located nearest to Kahnawà:ke's downtown community core. It is adjacent to the city of Sainte-Catherine's industrial sector and light commercial activity along Route 132. The lands directly across Highway 30 are undeveloped woodland in the jurisdiction of Sainte-Catherine; the areas further north and east are used for heavy industrial, commercial, and some residential purposes.

Parcel A (Lot 62 Block H).



Access

The parcel is bounded by active railway tracks on its west and south sides, and Highway 30 on its east side. To its north lies Route 132; however, it is important to note that the northern property line of the parcel does not touch this road but sits approximately 100 metres to the south (see Figure). Although considered unceded in the eyes of Kahnawà:ke, this 100-metre strip of land was not included in the Highway 30 agreement, as it is an easement for Route 132. As a result, the City of Sainte-Catherine continues to consider it part of their territory. Sainte-Catherine intends to redevelop Route 132 as an urban boulevard and community entrance and has indicated the corridor on either side of the roadway as a “road redevelopment zone” (Ville de Sainte-Catherine, 2015, 2023). Some coordination with the MTQ and/or the City of Sainte-Catherine would likely be required in order to give access to the parcel via Route 132. This and the other surrounding transport infrastructure raise the question of where to situate an access road; the most likely access strategies are either a tunnel under the railroad tracks or an entrance from Route 132, both of which would require agreements with external actors (CPKC and the City of Sainte-Catherine, respectively).

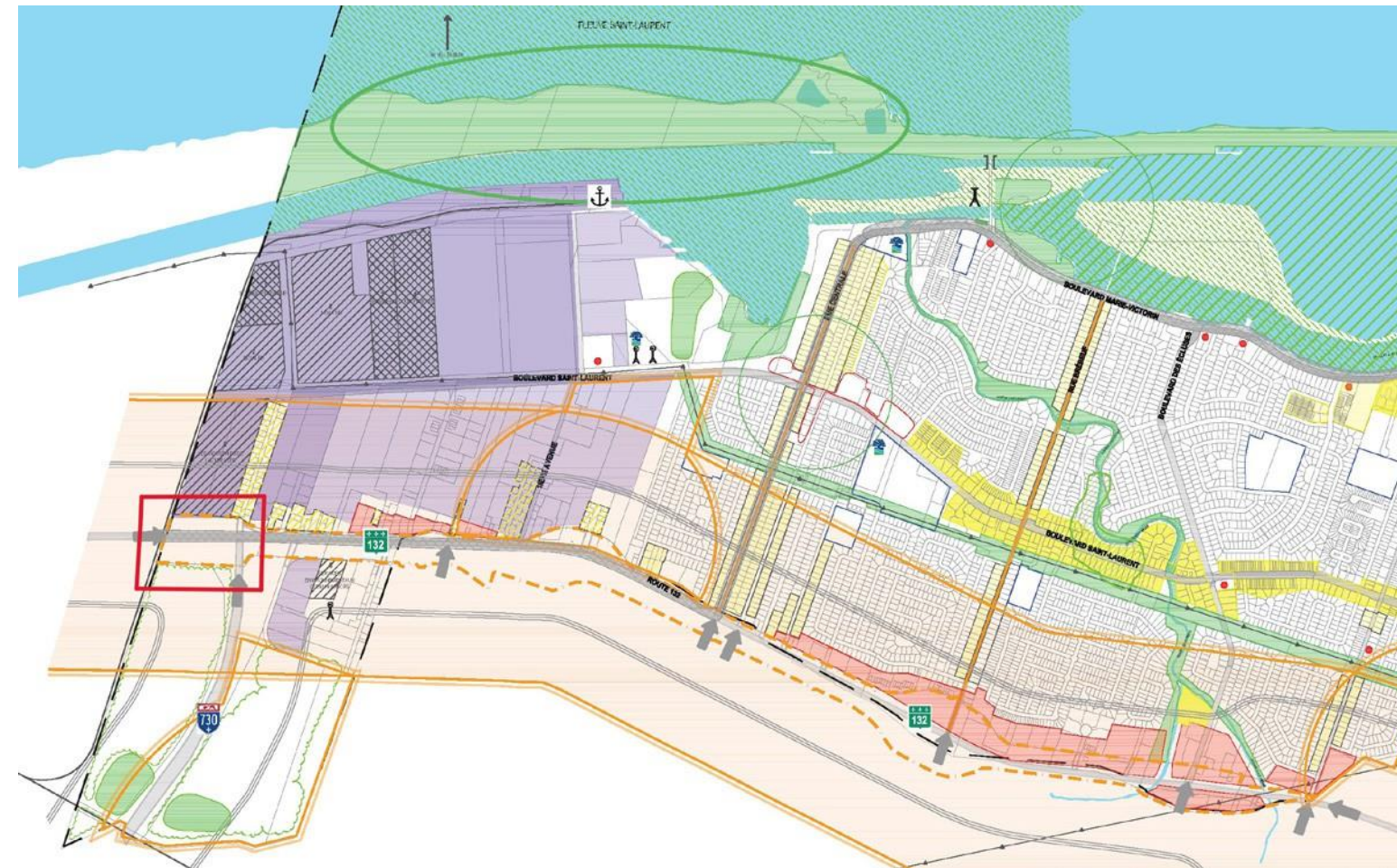
Infrastructure

Parcel A is situated very close to the existing water and sewer networks that run along Route 132 and the railway tracks, particularly water. Costs to extend these networks to this parcel would most likely be lower than for others, but this must be confirmed with an infrastructure study and capital plan.

Ground cover

The land is covered by a mix of forest (on the northern two-thirds of the parcel) and wetlands (on the southern third). This wetland area continues into the northern tip of parcel B and is bisected by railroad tracks.

Development potential and constraints” map from the City of Sainte-Catherine’s master plan, showing the road development zone outlined in orange



Source: (Ville de Sainte-Catherine, 2015)

Soil quality

The Phase I and II soil quality evaluation concluded that parcel A likely did not contain any contaminants, which suggests it should be suitable for any land use. However, because analysis was not performed on the samples extracted in 2013, no empirical evidence exists to support this assumption.

Archaeological sites

The 2009 archaeological potential study identified overlapping areas of both prehistoric and historic archaeological potential on parcel A. These areas cover a considerable swath of land on the northern part of the parcel. Further studies should be conducted, if considered pertinent, by the relevant authorities to determine the validity of this archaeological potential.

Feasibility evaluation

Agriculture

Parcel A may be partially suitable for in-ground agricultural development but requires further soil quality testing to validate. Due to soil saturation levels caused by the wetlands, further research will be required to determine types of suitable crops. Archaeological surveying is also required prior to considering agricultural uses.

Commercial

To complement adjacent commercial uses, this parcel may also be considered for partial commercial development pending further studies to determine potential access points, infrastructure needs, and drainage.

Conservation/Recreation

Due to the existing wetlands and limited access to the site, parcel A is ideal for partial or full conservation and passive recreation activities (which are generally more sedentary in nature), such as walking, picnicking, sitting, reading, and board or table games.

Industrial – light

Considering adjacent industrial uses in Sainte-Catherine, light industrial uses may also be considered pending further research on on-site access, effective drainage, and infrastructure needs. Any industrial development should respect and mitigate any potential impacts to the existing wetlands on the parcel and nearby residences.

Institutional

Institutional uses are less ideal on this lot, as they would be isolated from all other institutional uses. This type of development would also need to consider access and drainage potential if selected.

Mixed-use

A mixed-use development with commercial and residential uses is not favorable. Although there is potential for commercial development, residential development is not recommended for Parcel A, as explained below.

Residential

Parcel A is unsuitable for residential development due to the parcel's isolation, access constraints, surrounding nuisances (noise, traffic, and pollution), safety, and potential infrastructure and drainage challenges.

Land use recommendations

As discussed in previous sections, parcel A has significant constraints in terms of access, infrastructure, wetlands, and archaeological potential. The lack of a clear access point is the main constraint. Additionally, the nearby intersection of Highway 30 and Route 132 is highly congested; land use with the potential to generate significant vehicular traffic should be avoided for these reasons.

In addition to these concerns, the high level of noise and air pollution caused by the highways, railways, and nearby industry and the parcel's fragmentation from the existing community core make it one of the least suitable for residential development. Despite its proximity to industry, development of the parcel for commercial, industrial, or logistical ends would only be feasible if an agreement were reached with the surrounding municipalities, the CPKC, and/or the MTQ to create a suitable entry and exit point.

Parcel A is also partially covered by a large wetland that extends onto parcel B. The northern two-thirds of the lot are forested. The soil quality is most likely suitable for any use, including in-ground agriculture. While wetlands have, in some cases, been drained and converted to agricultural lands, this process is complex and costly, and intensive agricultural use can have many negative impacts on ecosystems, such as major carbon dioxide emissions resulting from the oxidation and subsidence of peat lands. Draining wetlands often also results in low-lying areas that are prone to flooding. Less intensive agricultural uses that complement the ecosystem services of wetlands could be investigated, but there is no clear research into these practices (Verhoeven & Setter, 2010). Overall, agriculture is not recommended for the wetland portion of the parcel for the sake of conserving the vital biodiversity of the ecosystems.

LEGEND

- Not at all suitable
- Partially suitable or suitable with conditions

PARCEL	AGRICULTURE	COMMERCIAL	CONSERVATION / RECREATION	INDUSTRIAL - LIGHT	INSTITUTIONAL	MIXED-USE	RESIDENTIAL
A	■	■		■	■	■	■

PARCEL B (NORTH)



PARCEL B (NORTH)

Development constraints

Parcel B, split into two parcels known as Lot 177 Block G (B north) and Lot 176 Block G (B south), is located south of parcel A along Highway 30. The centre point of Lot 177 Block G is located at the coordinates 45,38285° N; 73,614955° W; the lot has a surface area of 68.8 acres (27.8 hectares).

Surrounding uses

Lot 177 Block G is situated near residential development (Lot 106) and woodland in Kahnawà:ke. In Saint-Constant, low-density residential development is separated from Highway 30 by a belt of undeveloped woodland. Overall, the northern portion of Parcel B is surrounded by residential and natural land uses.

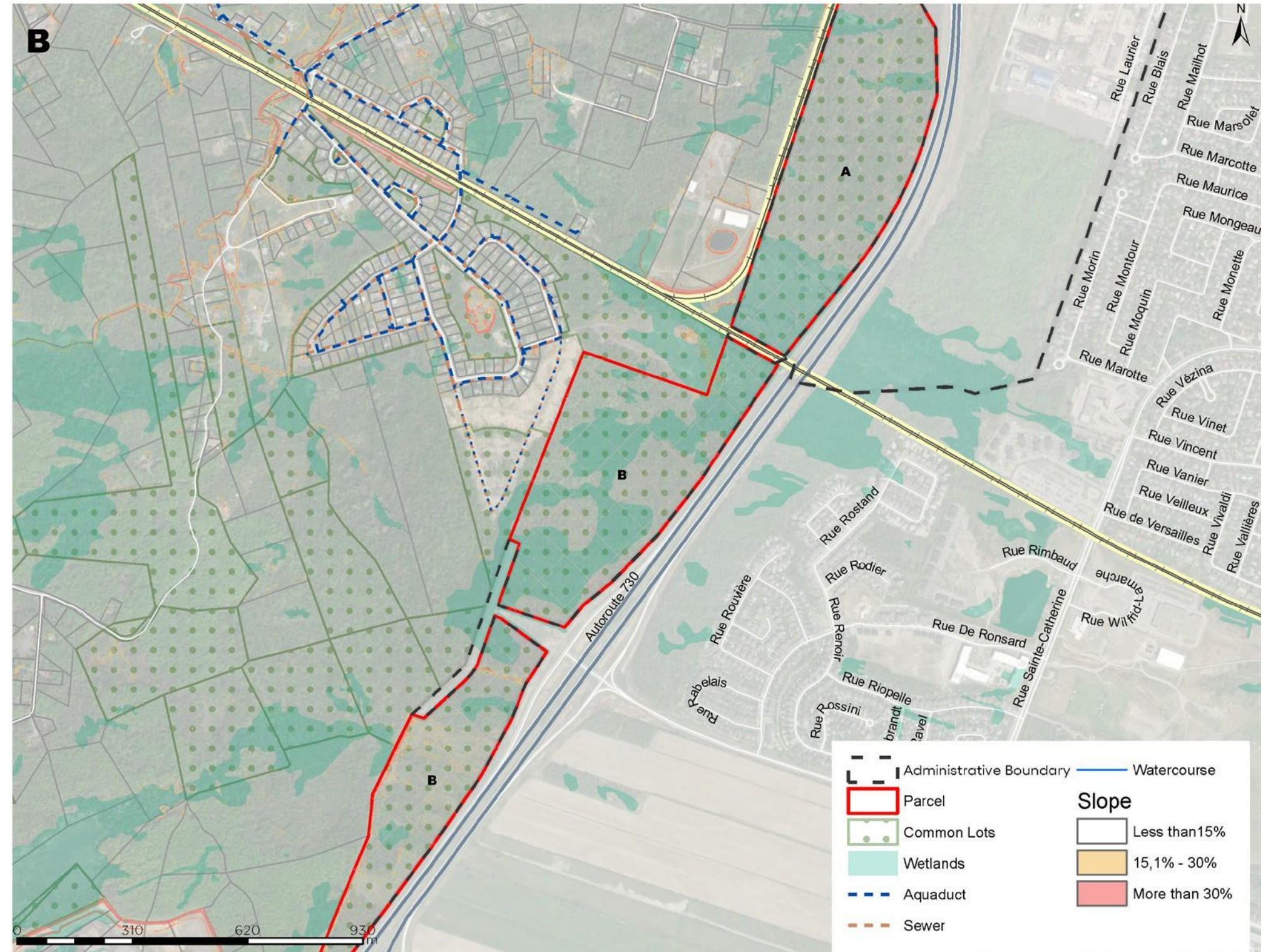
Access

Lot 177 Block G is bounded to the north by railroad tracks and residential roads in Kahnawà:ke. The two halves of parcel B are separated because the MTQ owns lands required for a potential expansion of the Highway 730/Montée Saint-Régis interchange, which, if built, would provide direct access to both halves of the parcel (see figure). It could also conceivably connect to existing roads in Kahnawà:ke and the other Highway 30 lands.

Preliminary development constraints identified for parcel B

LOT # Lot 177 Block G	CONSTRAINT B (NORTH)
ACCESS	
INFRASTRUCTURE	X
WETLANDS	X
SOIL QUALITY	
ARCHAEOLOGICAL POTENTIAL	

Parcel B north (Lot 177 Block G).



This access scenario was studied by the MTQ in 2013, as mentioned in section 3.5.1, and was found to be the second least costly option of the four studied, at \$4,200,000 in 2013 (Ministère des Transports du Québec, 2013). While it appears to be technically and financially feasible, it would encroach on existing wetlands and would require cooperation from multiple levels of government. Additionally, its feasibility would require more in-depth study to determine.

It should be noted, however, that the community is not unilaterally in favour of the construction of a public access point to the community from Highway 30. While some residents believe that a new access point would improve emergency service access, others are reticent due to concerns about community safety. A development plan for this parcel that includes a highway access would likely face some resistance from community members. Upcoming community engagement sessions would be an excellent opportunity to reopen the discussion and gauge public opinion on this matter.

The abundance of common lots adjacent to parcel B also implies that it should be feasible to construct a local access road from within the community without requiring the permission of area landowners.

Infrastructure

The closest water and sewer connections are at Lot 106. While it may be possible to connect to the existing network, the costs associated with this expansion are a potential barrier to development.

Ground cover

The ground cover of the northern portion of parcel B (Lot 177 Block G) is characterized by intermixed forest and wetlands – about half and half.

Soil quality

The northern portion of this parcel has never been sampled, but the phase I characterization study found no reason to suspect contamination.

Archaeological sites

No archaeological potential was identified on parcel B in the 2009 study; further study of this parcel is not recommended.

Feasibility evaluation

Agriculture

Agricultural uses may be partially suitable for this parcel due to site access and based on the soil saturation levels resulting from the wetlands. As well, validation of soil quality is recommended.

Commercial

Commercial development on this parcel is possible due to existing nearby water, sewer, and electrical infrastructure. However, the current capacity of the network may limit the possible scale of commercial services. For example, commercial uses with lower demand for electricity and water may be more viable, whereas a large commercial development will likely require an expansion of the network. Further information is required about whether potential commercial services, on this parcel, would target the local community or outside markets, which would require an alternate access route such as through Highway 30.

Conservation/Recreation

Parcel B is highly suitable for partial or full conservation and passive recreation, for residents, being that approximately half of the area comprises forest and wetlands.

Industrial – light

Considering there are no adjacent industrial uses nearby, and the majority of the parcel comprises wetlands, this would be a less suitable option, although there is access to nearby water, sewer, and electrical infrastructure.

Institutional

Some community services, such as daycare or a satellite police or fire station, could be offered in this area to serve the nearby residential development.

Mixed use

Parcel B is partly suitable for mixed use development as per the commercial section above and the residential section below.

Residential

Residential development is suitable for this parcel as it would compliment adjacent uses on Lot 106. Access is possible through Lot 106 as well as connections to the existing infrastructure networks. Medium density housing could be an option in this area to help sustain commercial and institutional services. Mitigation measures would be necessary to ensure proper drainage and conservation of the wetlands.

Land use recommendations

The key constraints to development on the northern portion of parcel B are the presence of significant wetlands and the cost to extend infrastructure networks to service the lands. However, concerns about soil quality, archaeological potential, and access from within the community are minimal.

Depending on the ultimate vision, this lot could be developed to accommodate various uses, including commercial activity (office or retail space, for example), housing, or in-ground agriculture, while conserving the existing wetlands (see figure). The conserved wetlands could be kept entirely natural or landscaped with trails and boardwalks to create a neighbourhood park.

The following sketch illustrates some of the ideas proposed in this section, including the configuration of possible development pockets around existing wetlands. It is intended as one example among many possibilities, not to restrict future decision-making or illustrate a decisive vision of development.

Evaluation of the suitability of each potential land use parcel B north

PARCEL	AGRICULTURE	COMMERCIAL	CONSERVATION / RECREATION	INDUSTRIAL - LIGHT	INSTITUTIONAL	MIXED USE	RESIDENTIAL
B (NORTH)	Partially suitable or suitable with conditions	Partially suitable or suitable with conditions		Partially suitable or suitable with conditions	Partially suitable or suitable with conditions	Partially suitable or suitable with conditions	

LEGEND

- Not at all suitable
- Partially suitable or suitable with conditions

PARCEL B (SOUTH)



PARCEL B (SOUTH)**Development constraints**

The centre point of Lot 176 Block G is 45,375223° N; 73,621533° W and has an area of 43.5 acres (17.6 hectares).

Surrounding uses

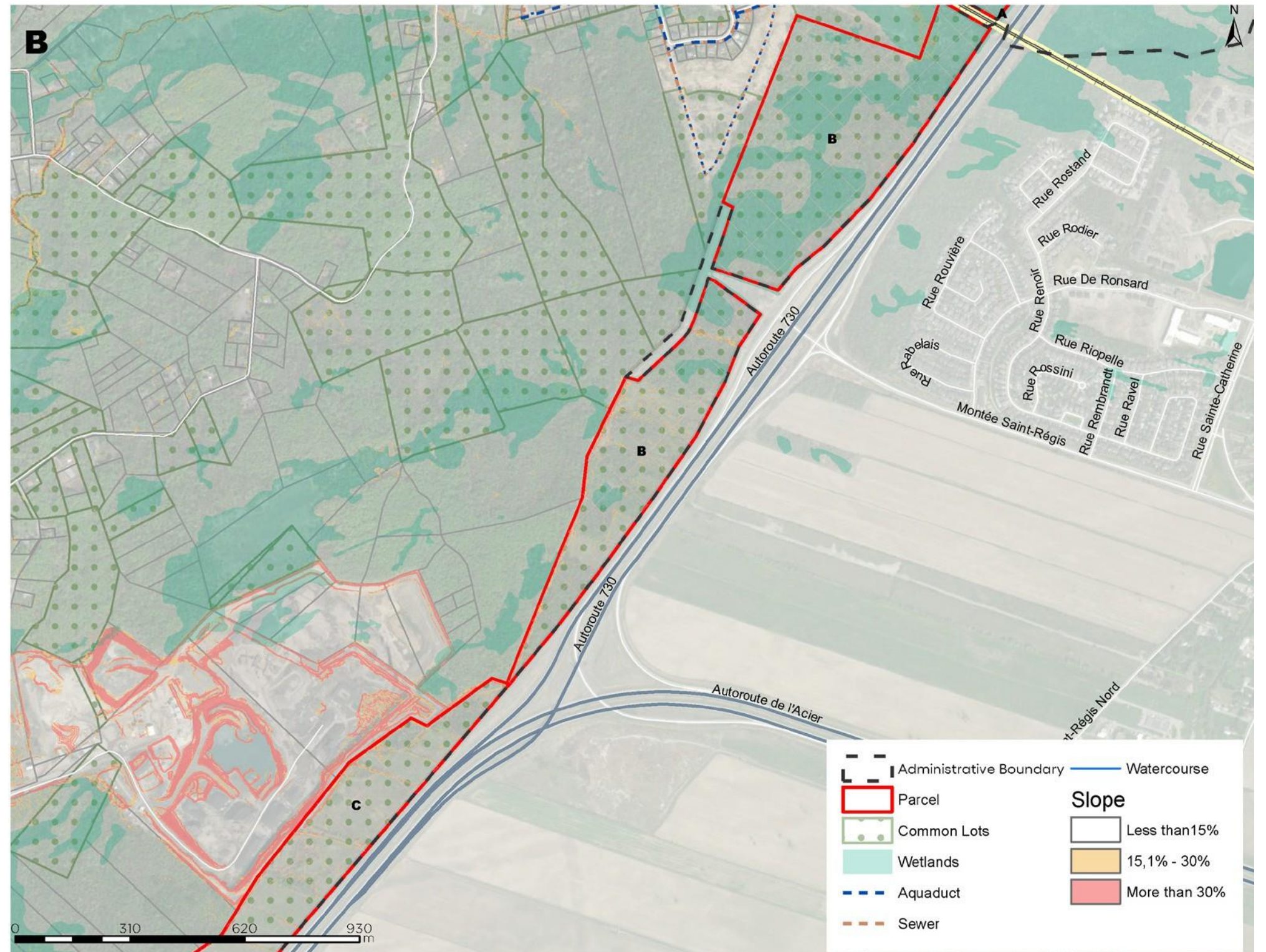
Lot 176 Block G, located immediately to the south, is surrounded by undeveloped parcels: forest in Kahnawà:ke, and across the highway, agricultural lands in Saint-Constant. However, the southern tip of this lot is located near Kahnawà:ke's JFK Quarry and the Highway 30/730 interchange, both of which may be significant generators of noise and traffic.

Although quarrying operations are intended to be phased out in the coming years, the subsequent filling activities will mean that the site will continue to generate noise, dust, and truck traffic for several decades. The site could also be used to manufacture asphalt in the future, but this is contingent upon a successful permit application, which cannot be submitted until asphalt production regulations are developed under Kahnawà:ke's Sanitary Conditions Law (C. Stacey, personal communication, July 26, 2024). However, it is important to understand that asphalt production is also a significant generator of noise and harmful emissions (Centers for Disease Control, 2014). Regardless of the site's future use, it is certain that it will be a generator of noise, dust, and traffic for the foreseeable future.

Preliminary development constraints identified for parcel B

LOT # Lot 176 Block G	CONSTRAINT B (SOUTH)
ACCESS	
INFRASTRUCTURE	X
WETLANDS	
SOIL QUALITY	X
ARCHAEOLOGICAL POTENTIAL	

Parcel B south (Lot 176 Block G).



Access

The same access considerations apply to Lot 176 Block G as to Lot 177 Block G. Additionally, an existing dirt road or trail is present on Lot 176 Block G that appears to connect to the quarry, parcel C, and eventually to Route 207 (partially shown in figure). This route could serve as a starting point for a future local road and could be considered in future development proposals.

Infrastructure

The closest water and sewer connections are at Lot 106. However, the southern portion of parcel B is far from the existing network – approximately 1 kilometre from the centre point of the lot. While it may be possible to connect to the existing network, the costs associated with this expansion are a potential barrier to development.

Ground cover

The southern portion (Lot 176 Block G) has fewer wetlands (only a few small pockets) and is covered by a mix of forest and disused agricultural fields (see figure).

Soil quality

Analyses of samples taken from the southern portion of the parcel returned some elevated metal levels, that, without remediation, would restrict development on the parcel to industrial, commercial, or some institutional uses (see section 3.6.3 for more details). However, these results should be checked with more precise testing.

Archaeological sites

No archaeological potential was identified on parcel B in the 2009 study; further study of this parcel is not recommended.

Aerial photo of parcel B showing existing dirt trail at right



Source: (obtained from KEPO, 2024.)

Aerial photo of parcel B showing various ground cover conditions



Source: (obtained from KEPO, 2024.)

Feasibility evaluation

Agriculture

In-ground agriculture is not suitable for Parcel B (south) due to moderate level pollutants found in the middle of the parcel through previous soil quality sampling (see section 3.6.3). Re-sampling is suggested to determine any potential areas within the parcel that could be suitable for rehabilitation for future in-ground agricultural uses.

Commercial

Parcel B is well-suited for commercial uses such as office or retail space pending further research of infrastructure costs and site access studies. As with Parcel B (north), determining the target market for commercial services may help to direct future studies into the optimal commercial use of the lot.

LEGEND

- Not at all suitable
- Partially suitable or suitable with conditions

Evaluation of the suitability of each potential land use parcel B south

PARCEL	AGRICULTURE	COMMERCIAL	CONSERVATION / RECREATION	INDUSTRIAL - LIGHT	INSTITUTIONAL	MIXED USE	RESIDENTIAL
B (SOUTH)							

Conservation/Recreation

In addition to other uses, this parcel is suitable for conservation and passive recreation as soil, with this quality range, is ideal for sidewalks, bike paths, parks, and roads (if needed). However, this parcel cannot be used for playgrounds or playing fields due to soil quality limitations.

Industrial – light

Due to the soil quality results, light industrial uses may be considered on this lot. Examples include distribution, storage, or rooftop agriculture.

Institutional

Only certain institutional uses are recommended on soil in this quality range such as indoor recreation facilities, and satellite police or fire services.

Mixed use

Although ideal for commercial services, Parcel B (north) is not suitable for residential development, thereby eliminating the option for mixed-use development.

Residential

Residential development is not suitable considering the quality of the soil on this parcel of land.

Land use recommendations

The key constraints to development on the southern portion of parcel B are the presence of elevated concentrations of certain metals and the cost to extend infrastructure networks to service the lands. However, concerns about wetlands, archaeological potential, and access from within the community are minimal.

The presence of small wetlands on this parcel should be preserved but would not be dominant in an overall strategy for development. Depending on the ultimate vision, this lot could be developed to accommodate various uses, including commercial activity (office or retail space, for example), light industrial uses (distribution, storage, or rooftop agriculture, for example), and institutional purposes (such as a satellite police or fire station or indoor recreation facility), while conserving the existing wetlands.

While areas of this parcel with problematic soil quality can potentially be rehabilitated, the cost and time involved with this process could still be limiting to development. In terms of institutional development, it should be noted that only certain uses are permitted on soil in this quality range (see section 3.6.3 for more information).

PARCEL C



PARCEL C

Development constraints

Parcel C, also known as Lot 175 Block G, is adjacent to Highway 30 and is bounded at its southernmost point by the intersection with Route 207. Its centre point is located at the coordinates 45,361854° N; -73,637046° W. It has a surface area 97.7 acres (39.5 hectares), making it the second-largest contiguous parcel.

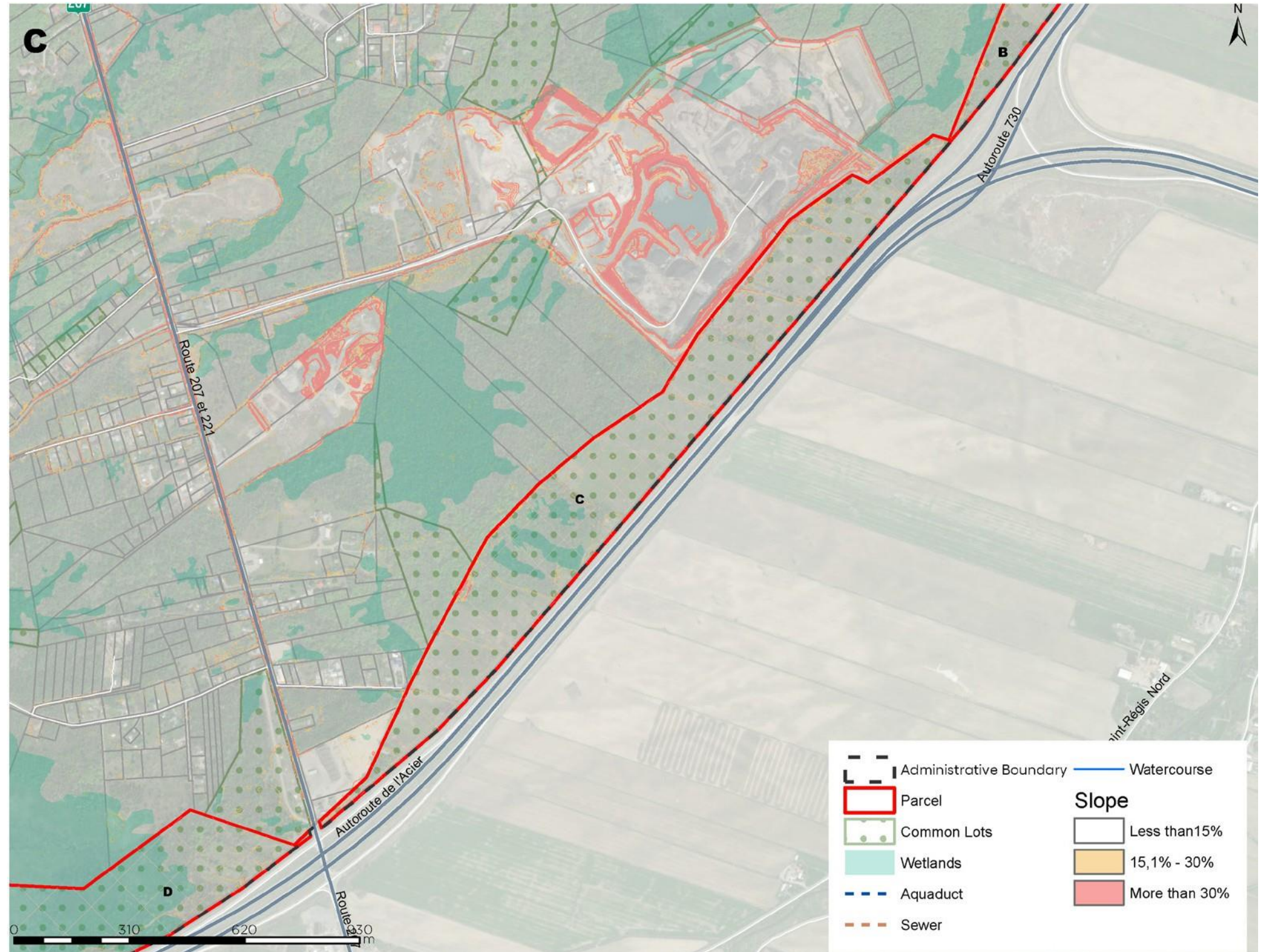
Surrounding uses

The Saint-Constant lands adjacent to parcel C are used for agricultural purposes. On the Kahnawà:ke side, the parcel is situated next to the JFK Quarry, woodlands, and light commercial and industrial uses, including a gas station located at the intersection of Highway 30 and Route 207. See section 5.4 for more information on environmental concerns pertaining to the quarry and its future. The lot is bookended by this intersection at its southern end and the Highway 30/730 interchange to the north. In sum, parcel C is surrounded by a variety of land uses, including commercial and industrial activities, some of which are significant generators of noise and possible air quality concerns.

Preliminary development constraints identified for parcel C

	CONSTRAINT
LOT # Lot 175 Block G	C
ACCESS	X
INFRASTRUCTURE	X
WETLANDS	
SOIL QUALITY	X
ARCHAEOLOGICAL POTENTIAL	X

Parcel C (Lot 175 Block G).



Access

The existing dirt road or trail noted on parcel B continues onto parcels C and D. It appears to connect the parcels to the JFK Quarry and Route 207. However, the lack of common lots connecting to existing local roads suggest that the development of a local access route to parcel C could be a challenge.

The intersection of Route 207 and Highway 30 is located at the southern tip of this lot. The construction of a full interchange at this location was studied by the MTQ in 2013 (see figure) and was deemed to be the least expensive option of the four scenarios analyzed (\$1,475,000 at the time of study). While this interchange would serve both parcels C and D, it would extend beyond the current Route 207 right-of-way (Ministère des Transports du Québec, 2013). Although it was the most feasible option studied at the time, further work and discussion is required to determine whether the implementation of this strategy is a real possibility.

An additional access option was also evaluated by the MTQ in 2013: the construction of a new interchange at the approximate midpoint of parcel

C (figure). However, this scenario was found to be the costliest option (\$22,050,000 in 2013 dollars). The construction of this interchange would also require the reorganization of the Route 207 intersection, and the final interchange would result in a nonstandard distance between interchanges, violating the MTQ’s norms (Ministère des Transports du Québec, 2013). This access option is therefore unlikely to be viable.

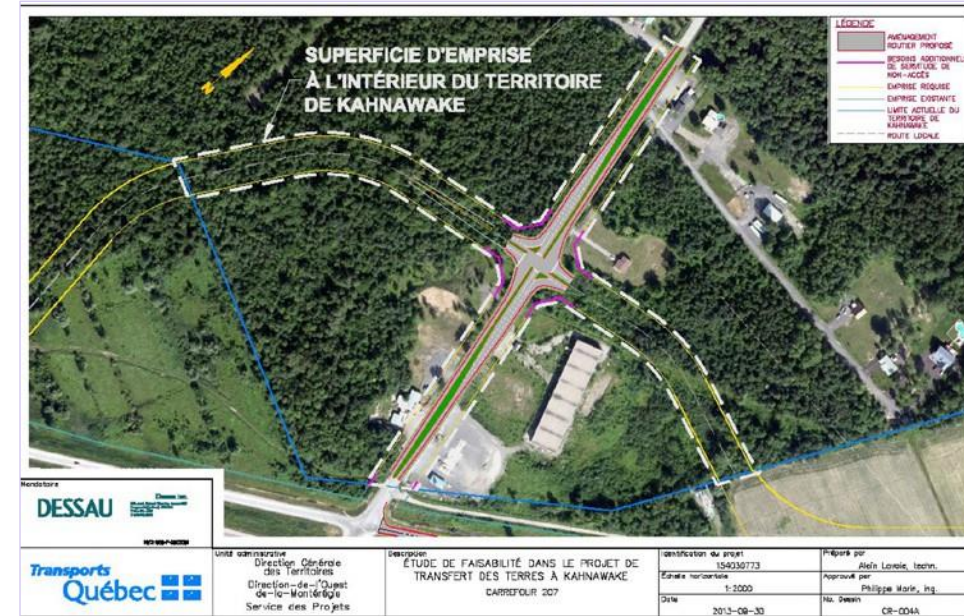
Infrastructure

The centre point of parcel C is approximately 2.8 kilometres (in a straight line) to the nearest existing water and sewer lines in Kahnawà:ke. As with the other parcels, questions of cost and capacity remain to be answered with certainty and could present a barrier to development.

Ground cover

The land on parcel C has significant current and former agricultural areas. There are additionally some small patches of mixed forest and wetland areas (see figure).

Route 207 interchange extension scenario as studied



Source: MTQ (2013)

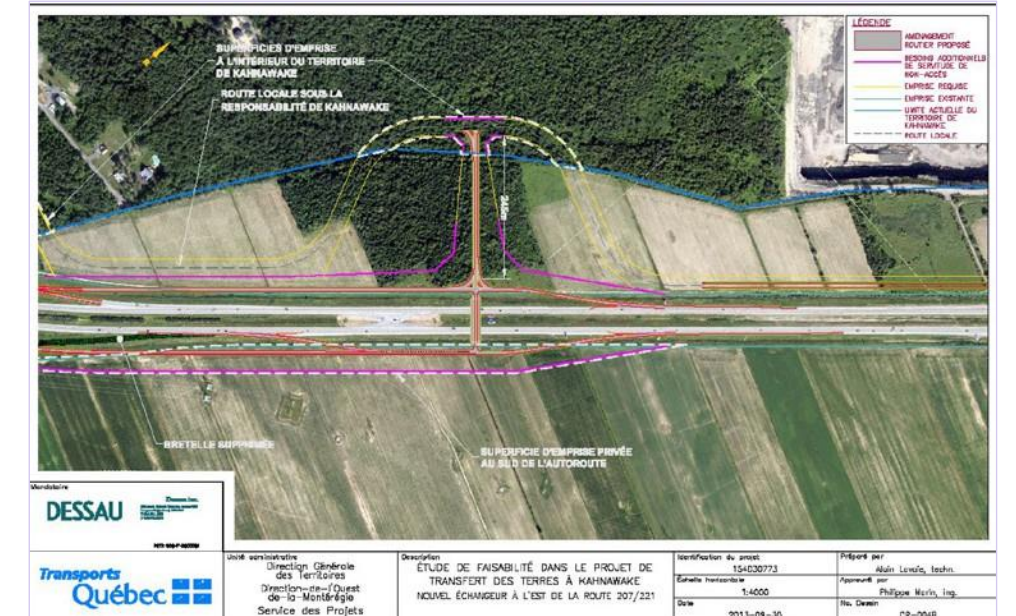
Soil quality

Soil quality test results from 2013 showed slightly elevated levels of manganese and cobalt, making the land unsuitable for agricultural use at the locations of those samples without soil remediation (on the southern end of the parcel). This does not preclude other development options. Elevated levels of methane biogas were also observed, which could require mitigation. These results must be confirmed with more precise sampling before any potential development is considered.

Archaeological sites

The 2009 archaeological potential study identified bands of prehistoric archaeological potential on parcel C. These bands cover the entire parcel and should be studied to better understand whether artifacts are present.

Parcel C interchange construction scenario as studied



Source: MTQ (2013)

Aerial (drone) photos of parcel C



Source: (obtained from KEPO, 2024)

Feasibility evaluation

Agriculture

Due to the soil quality range of certain sections of Parcel C (see section 3.6.3), in-ground agricultural uses within those areas are not suitable without extensive soil remediation and mitigation measures. Re-sampling is suggested to determine any potential areas within the parcel that could be suitable for rehabilitation for future in-ground agricultural uses.

Commercial

Commercial uses are partially suitable and compliment existing surrounding light commercial uses in the southern-most part of the parcel. Feasibility of access points and water, sewer, and electrical infrastructure must be studied further to determine viability for commercial development.

Conservation/Recreation

The small patches of forest and wetlands on Parcel C are suitable for conservation and passive recreation.

Industrial – light

Parcel C is partially suitable for light industrial activity and compliments current surrounding uses. Like commercial uses, access to the lot and infrastructure need to be studied more closely to further determine feasibility.

Institutional

Any institutional uses located on this parcel would be isolated from other institutional services of the community. Besides satellite police and fire services, institutional services like daycares, office space, and schools may be impacted by nuisances caused by nearby commercial and industrial uses.

Land use recommendations

Although commercial uses are partially suitable, residential development is not recommended as indicated below, thereby eliminating mixed-use development as a potential option.

Residential

Residential development is not suitable for Parcel C due to the soil quality, challenges with access and infrastructure, and because it would conflict with existing commercial and industrial uses (including heavy industrial uses near the JFK Quarry).

There are several important potential constraints on development for this parcel: the presence of elevated concentrations of certain metals and biogas, its proximity to the JFK Quarry, access to the site, archaeological potential, and the cost to extend infrastructure networks to service the lands. Some small wetlands are present on the parcel, but their preservation would not impede any potential development. While areas of this parcel with problematic soil quality can potentially be rehabilitated, the cost and time involved with this process could still be limiting to future development. Additionally, because of the presence of the quarry and its continuing use for heavy industrial activities, pollution will likely be an ongoing issue in the area.

Depending on the ultimate vision, this lot could be developed to accommodate various uses, including commercial activity (office or retail space, for example), light industrial uses (distribution, storage, or other light industrial use), and institutional purposes (such as a satellite police or fire station or indoor recreation facility), while conserving some greenspace and the existing wetlands (see figure). This parcel represents a good opportunity for revenue generation through leasing industrial or commercial space to external parties if desired.

Evaluation of the suitability of each potential land use parcel C

PARCEL	AGRICULTURE	COMMERCIAL	CONSERVATION / RECREATION	INDUSTRIAL - LIGHT	INSTITUTIONAL	MIXED USE	RESIDENTIAL
C	Not at all suitable	Partially suitable or suitable with conditions	Partially suitable or suitable with conditions	Partially suitable or suitable with conditions	Not at all suitable	Not at all suitable	Not at all suitable

LEGEND

- Not at all suitable
- Partially suitable or suitable with conditions

PARCEL D



PARCEL D

Development constraints

Parcel D (Lot 185 Block F) is adjacent to Highway 30 and is situated between Route 207 and Industriel Boulevard, the border between Kahnawà:ke and Chateauguy. Its centre point is located at the coordinates 45,348278° N; -73,665607° W. It has a surface area 224.9 acres (91 hectares), which makes it the largest contiguous parcel of the returned lands.

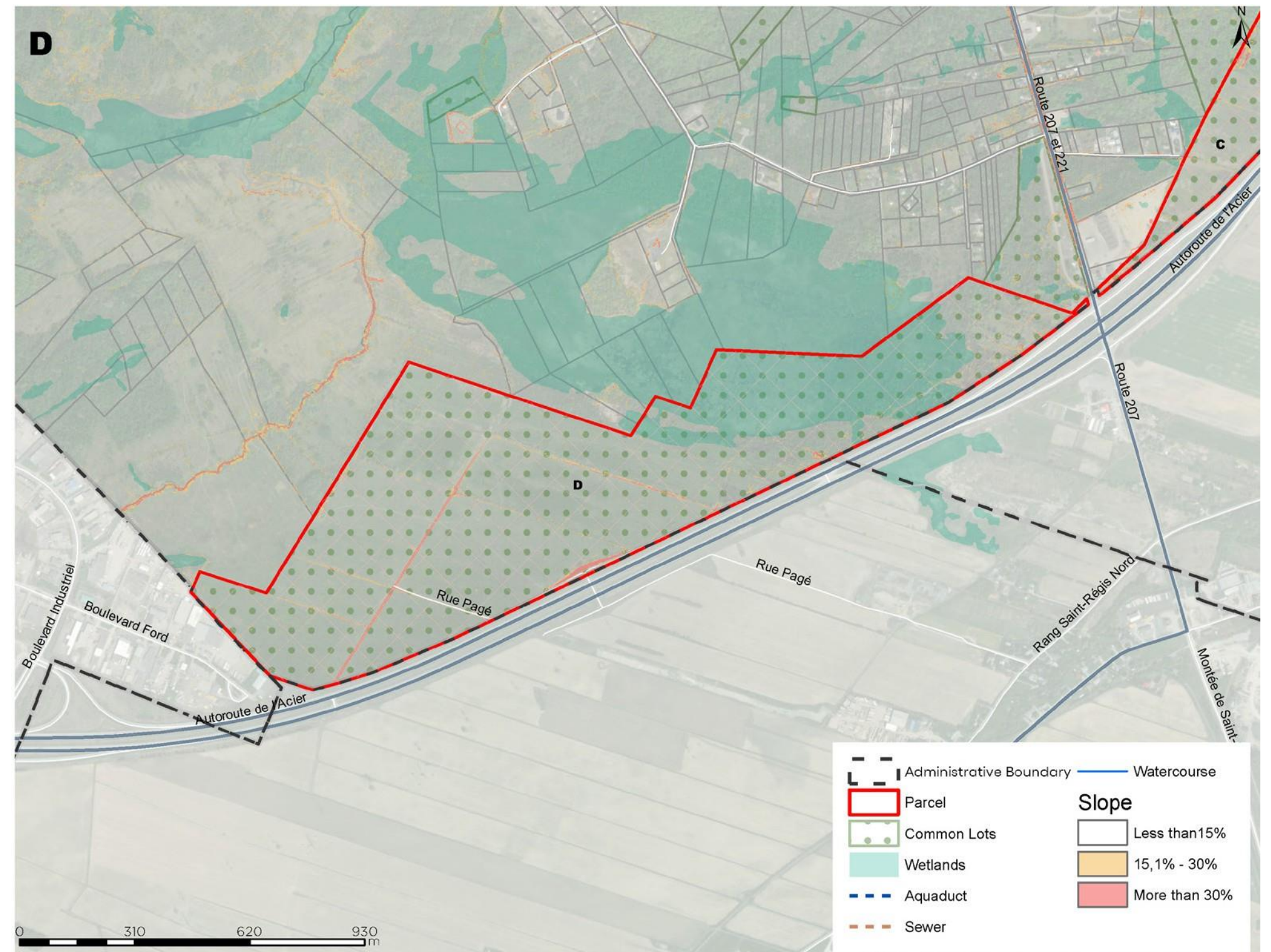
Surrounding uses

Parcel D touches three different Roussillon municipalities: from west to east, Chateauguy, Saint-Isidore, and Saint-Constant. Nearby land uses on the south side of the parcel (in Saint-Constant and Saint-Isidore) are primarily agricultural, but also include a modest town centre, some light commercial activity, and the Sintra Quarry, situated at a distance from the returned lands. On its west side, the parcel abuts the commercial and industrial activities that characterize the Industriel boulevard sector of Chateauguy. In contrast, the Kahnawà:ke lands that border the parcel are primarily natural in character. Overall, parcel D is surrounded by a great diversity of land uses.

Preliminary development constraints identified for parcel D

	CONSTRAINT
LOT # Lot 185 Block D	D
ACCESS	
INFRASTRUCTURE	X
WETLANDS	X
SOIL QUALITY	
ARCHAEOLOGICAL POTENTIAL	X

Parcel D (Lot 185 Block F)



Access

An agricultural overpass over Highway 30 currently connects parcel D to agricultural lands in Saint-Isidore. From the overpass, a dirt road extends to Route 207, connecting the parcel to the rest of Kahnawà:ke. An additional trail is present on the parcel and extends northwest onto adjacent lands in Kahnawà:ke.

An expansion of the agricultural overpass was explored as an option for external access to the returned lands. It was found to be the second most costly option, at \$15,625,000 at the time. The scenario would not encroach on wetlands or on Kahnawà:ke’s lands, but would require twin-ning of the existing overpass and would create a nonstandard distance between the proposed and existing interchanges (Ministère des Transports du Québec, 2013). Willingness on the part of the MTQ to implement this option seems unlikely, although it could be revisited in future discussions. However, access to the parcel from outside of the community is not deemed a priority.

On the other hand, the presence of public lands at the intersection of Highway 30 and Route 207 suggests easy access to the parcel from within the community.

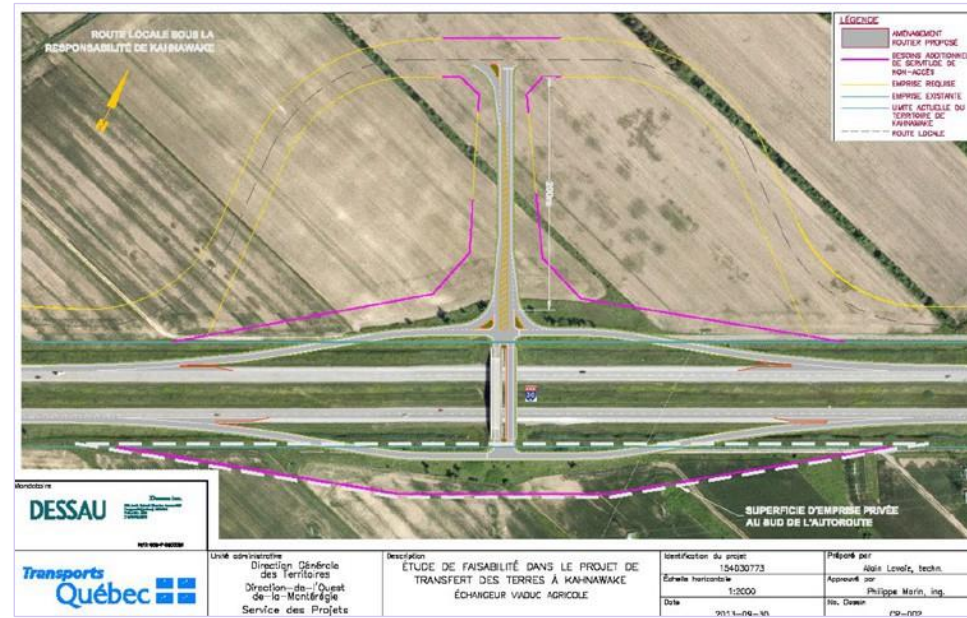
Infrastructure

The straight-line distance from the centre point of the parcel to the nearest existing Kahnawà:ke water and sewer lines is approximately 5.3 kilometres. As with the other parcels, questions of cost and feasibility remain to be answered with certainty and could hinder development. However, due to the proximity of the lot to Chateaugay, the possibility of connecting to the City’s network should be explored in more depth.

Ground cover

A significant southern portion of the parcel is covered by agricultural fields and some shrubland. Wetlands cover the majority of the northern portion of the lot (north of the Saint-Isidore/Saint-Constant border). Finally, there are small amounts of tree-covered land near the highway and in the northernmost corner of the parcel.

Agricultural overpass scenario as studied



Source: MTQ (2013)

Soil quality

Because the phase I soil quality characterization did not find any reason to suspect pollution on this parcel, it has never been analyzed for contaminants. On this basis, it is considered suitable for any form of development.

Archaeological sites

The 2009 archaeological potential study identified bands of prehistoric archaeological potential on the southern portion of parcel D (south of the Saint-Isidore/Saint-Constant boundary). Further studies should be conducted if considered pertinent by the relevant authorities.

Evaluation of the suitability of each potential land use parcel D

PARCEL	AGRICULTURE	COMMERCIAL	CONSERVATION / RECREATION	INDUSTRIAL - LIGHT	INSTITUTIONAL	MIXED USE	RESIDENTIAL
D			Partially suitable or suitable with conditions				

Site photo of parcel D



Source: (taken by project team, 2024)

Feasibility evaluation

Agriculture

The quality of the soil on Parcel D is suitable for in-ground agriculture, and the size of the parcel means commercial-scale food production could be possible. Additionally, the parcel is large enough to accommodate agricultural use with the proper buffer zones from nearby industrial uses in Chateaugay.

LEGEND

- Not at all suitable
- Partially suitable or suitable with conditions

Commercial

Commercial uses are considered highly feasible on this parcel due to easy access from within the community and compatibility with surrounding uses.

Conservation/Recreation

There are few wetlands on the parcel, and it is located far from populated sectors of the community, meaning it would not serve many residents as a neighbourhood or community park. However, the existing wetlands could feasibly be conserved as a natural area.

Industrial – light

Light industrial uses are considered highly feasible on Parcel D due to the parcel's size, which would permit for industrial development without negatively impacting the neighbouring residents.

Institutional

Institutional uses are less ideal on this lot, as they would be isolated from all other institutional uses.

Mixed use

For the same reasons outlined for commercial and residential uses in this section, mixed use development is mostly feasible on Parcel D, but consideration should be given to the broader development plan to ensure that mixed use development here does not feel isolated from the community core or underserved by services

Residential

Residential development on parcel D would require a buffer zone from the industrial uses along Industriel Boulevard, but the parcel is large enough to permit this. However, housing in this area could be isolated from other developed areas of the community if not accompanied by a larger development plan with services and employment opportunities. The quality of the soil also permits residential use without requiring any remediation, although this should be confirmed with further testing.

Land use recommendations

There are several important potential constraints shaping the development of this parcel, including the cost to service the land, the presence of wetlands, and possible archaeological findings. Due to surrounding common land, there are good prospects for developing an access point to the lot.

Depending on the final priorities for designation of the returned lands, this lot could be developed to accommodate various uses, including commercial activity (office, retail, or entertainment space, for example), light industrial uses (distribution, storage, or roof-top agriculture), development of community institutions, and residential or mixed use development, while conserving the existing wetlands. Recreational uses can also be integrated on the rooftops of commercial buildings if desired. The benefit of a mixed-use development is to provide a space where people can live, work, and play. As well, it can encourage walkability and reduce sprawl.

Missing middle housing is a promising housing typology to respond to the housing demands identified in section 3.3.4. These forms of housing are typically medium-density (compatible in scale with single-family homes) and help to meet demand for walkable living, respond to shifting household demographics, and meet the need for more housing choices at different price points. This housing style can vary from duplexes, to triplexes, to mid-rise apartment buildings accommodating anywhere from 4 to 19 units.

While the nearby highway and industrial area are potential generators of noise, the lot is quite deep; residential uses can therefore be set back from the perimeter of the parcel, with commercial, light industrial, institutional, and recreational buildings used to create a visual and sound barrier between homes and the highway. Like parcel A, the wetland can be made into a park incorporating elevated boardwalks, walking trails, and roadways through or around the wetlands. Areas for seating and shelter are also important.

Given the lot's proximity to Chateauguay and the excellent possibilities for access to the parcel, it represents a good opportunity for revenue generation through leasing industrial or commercial space to external parties if desired.

PARCEL E



PARCEL E

Development constraints

Parcel E (Lot 111 Block B) is adjacent to the municipality of Chateauguy, situated along Chemin Saint-Bernard/Old Chateauguy Road. Its centre point is located at the approximate coordinates 45.382777° N, 73.734444° W. It has a surface area of 34.7 acres (14 hectares), which makes it the smallest contiguous parcel of the returned lands.

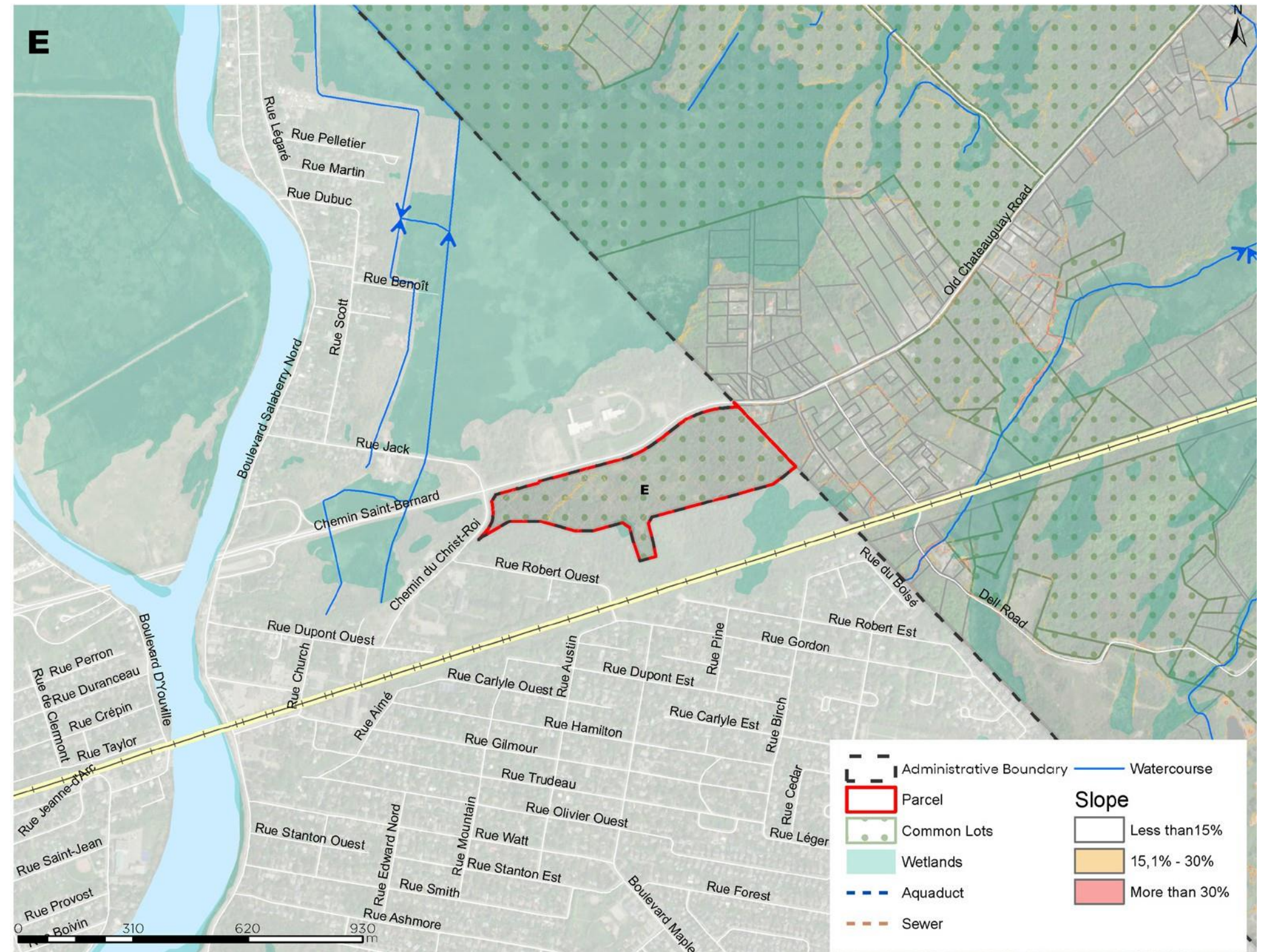
Surrounding uses

Parcel E is surrounded on three sides by the city of Chateauguy. The area is primarily residential and includes a significant wooded park area to the south of the parcel. Additionally, Chateauguy’s wastewater treatment plant is situated across Chemin Saint-Bernard from the parcel. Gas emissions from this plant may be harmful to human health, in addition to their unpleasant smell. However, air quality testing and further research into their long-term health impacts is necessary to fully understand the risk level associated with the water treatment facility. In Kahnawà:ke, Old Chateauguy Road is home to residences and light commercial activity.

Preliminary development constraints identified for parcel E

	CONSTRAINT
LOT # Lot 111 Block B	E
ACCESS	
INFRASTRUCTURE	X
WETLANDS	
SOIL QUALITY	UNKNOWN
ARCHAEOLOGICAL POTENTIAL	X

Parcel E (Lot 111 Block B)



Access

The parcel is bordered on its north side by Chemin Saint-Bernard (Old Chateauguay Road in Kahnawà:ke) and Chemin du Christ-Roi, both local roads Chateauguay. Access is not a concern for this parcel as it is situated on a local road.

Infrastructure

The distance from the approximate centre point of parcel E to the nearest existing Kahnawà:ke water and sewer lines is approximately 3 kilometres in a straight line. As with the other parcels, questions of network capacity remain to be answered with certainty and could hinder development. However, due to the proximity of the lot to Chateauguay, the possibility of connecting to the City’s network should be explored in more depth.

Ground cover

Parcel E is covered by a combination of forested areas and shrubland. Additionally, KEPO shows the presence of a swamp in the middle of the parcel (Kahnawà:ke Environment Protection Office, 2024), which is not represented in other data sources. This should be confirmed with a site visit.

Soil quality

Parcel E has not been included in any previous soil quality testing; this must be completed to understand any potential related constraints on development in this area.

Archaeological sites

The 2009 archaeological potential study identified bands of both prehistoric and historic archaeological potential on parcel E; these bands cover the entire parcel. Further studies should be conducted if considered pertinent by the relevant authorities.

Aerial photo of parcel E



Source: (retrieved from Google Maps, 2024)

Feasibility evaluation

Agriculture

Parcel E is relatively small and surrounded by low-density residential development, and the soil quality is currently unknown. If the soil quality is tested and found to be suitable for in-ground agriculture, the parcel could be used as a community garden, but its size and proximity to housing make it unsuitable for commercial-scale cultivation. However, further research is required to understand whether emissions from the water treatment plant could contaminate nearby crops.

Commercial

Commercial uses are feasible on this parcel due to its clear access points. Such uses would also be consistent with nearby development along Old Chateauguay Road and most likely would not conflict with surrounding residential uses.

Conservation/Recreation

There are no known wetlands on this lot, so conservation is not required. However, the lot could easily continue to be used as an informal recreational area or transformed into a more structured neighbourhood park.

LEGEND

- Not at all suitable
- Partially suitable or suitable with conditions

Evaluation of the suitability of each potential land use parcel E

PARCEL	AGRICULTURE	COMMERCIAL	CONSERVATION / RECREATION	INDUSTRIAL - LIGHT	INSTITUTIONAL	MIXED USE	RESIDENTIAL
E	■	■	■	■	■	■	■

Industrial – light

Light industrial development is not considered compatible with the nearby residential development in Kahnawà:ke and Chateauguay, as the parcel's size limits the possibility of implementing the proper buffer zones.

Institutional

Institutional development is not recommended due to the area's distance from the existing community core and the other developable areas.

Mixed use

Parcel E is partly suitable for mixed use development, per the commercial section above and the residential section below.

Residential

In terms of surrounding uses, residential use is highly suitable for Parcel E. However, more information about soil and air quality is needed to confirm the safety of residential development in the area.

Land use recommendations

Parcel E is the smallest parcel of the returned lands and is situated at a significant distance from the Highway 30 lands, yet, it has similar constraints that must be considered. The greatest of the known constraints are the absence of water and sewer infrastructure and the hazards and nuisances associated with the nearby Chateauguay wastewater treatment plant. Emissions from a wastewater treatment plant typically include hydrogen sulfide (H₂S), methane, and VOCs, which can be harmful to humane health and/or explosive. However, specific information on emissions from the Chateauguay plant and its impacts on nearby residents is not available. The soil on this parcel has not been evaluated or tested; the recommendations put forth in this section are contingent upon suitable soil quality.

Surrounding development is predominantly low-density residential. The parcel is well-connected to Exo public transport in Chateauguay and there are no access constraints. The parcel is therefore well-suited for low- to medium-density development that fits the definition of missing middle housing. This is ideal to help meet the housing demands identified in section 3.3.4. Development of this parcel is an opportunity to provide housing for Kahnawà:ke residents or community members who currently live outside the borders of the community. Housing can also be aimed at specific groups, such as students or elders. Another option is to explore the use of the ground-floor for commercial use on Chemin St. Bernard, entailing a potential mixed-use designation.

Integrating development with surrounding uses, while preserving the natural environment, is also recommended. Forested multi-use trails (for walking and cycling) as well as a central fire pit for neighborhood gatherings could be added. Residential development can be planned in a way that maximizes the conservation of large trees and green space. Strategic tree planting and choices of vegetation could mitigate views of the of Chateauguay's wastewater treatment plant and combat its potential unpleasant odours.

INTER-NATION
COLLABORATION
NORTHERN
INDIGENOUS
SOUTHERN



| BC2