

LAKESHORE GREENHOUSE STUDY

JULY 15, 2022

PREPARED BY:

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EXECUTIVE SUMMARY

- The subject report at the time of writing is a first iteration of a final report to Lakeshore Council following further research; public, agency and stakeholder consultation.
- In 2019, Council reacting to public complaints in Kingsville and Leamington, where there is an extensive large scale greenhouse farm (LSGF) industry, directed Lakeshore Administration “to bring back a report on a light pollution by-law relating to greenhouses”. Subsequently Council enacted an Interim Control By-law (ICBL) to be lifted once a study had been completed.
- Based on a high-level environmental scan which informed the Terms of Reference which were approved, following which SSPL was retained to undertake the study in February 2022, the proposed report was expanded to cover a potential wide range of effects, positive and negative, from LSGF’s.
- These effects included: Financial; Land Use Compatibility (consisting of lighting, odour, girdling, employee housing and eventually, wind turbines); and climate change.
- Research to date is based on extensive interviews with those with active experience and interests in LSGF’s, and various related documents.
- Although many sources were tapped, the most valuable information was provided by the Ontario Greenhouse Vegetable Growers Association (OGVG); the Municipality of Leamington Development Review Team, and Town of Kingsville Planning Department.
- The suggested Official Plan Amendment (OPA) and Zoning By-law Amendment (ZBA) were prepared utilizing the latest such documents found in Kingsville (OPA) and Chatham-Kent (ZBA) with revisions for Lakeshore, and addressing those anticipated effects with appropriate OPA policy and zoning regulations updates.
- The subject effects lighting, odour, girdling and wind turbines can be addressed through official plan policies and zoning regulations. Financial effects can be

dealt with through an updated Lakeshore Strategic Plan and climate change effects through modern policies already found in the draft Lakeshore Official Plan awaiting final approval.

- Next steps include preparation of an updated report for the August 23 on-site and virtual public presentation / open house, and completion of a final report with recommendations for a September 13 Council meeting.

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LAKESHORE GREENHOUSE STUDY

1.0 FOREWARD

- At the time of writing, significant research has been completed, primarily through various stakeholder and agency interviews, and review of relevant documents, considered sufficient to make an initial report available for public scrutiny. However, important further follow up interviews and document review are also planned in the next few weeks that may affect future iterations of this document. As noted later in this report, there will be considerable opportunity for timely public and stakeholder comments.

2.0 INTRODUCTION

2.1 Background

- In 2019 Council for the Municipality of Lakeshore, reacting to public complaints in other Essex County municipalities where there was existing substantial greenhouse development, directed Lakeshore Administration “to bring back a report regarding a light pollution by-law relating to greenhouses.”
- Eventually Storey Samways Planning Ltd. (SSPL) was retained to provide a study with regard to not only lighting but to consider all effects, positive and negative, of potential expansion of the large-scale greenhouse farm (LSGF) industry into Lakeshore.
- For the purposes of this report, LSGF’s are considered to be greenhouse operations which include structures under glass over five (5) acres in area. No operations of this magnitude presently exist in Lakeshore.

- 2.2** The study Terms of Reference are attached as **Appendix “A”**.

2.3 Purpose

- Identify possible effects / impacts of Large Scale Greenhouse Farm (LSGF) development

2.4 Goals

- Prepare updated Official Plan policies and zoning regulations
- Provide recommendations to Council for further study / activities beyond the scope of this report.

2.5 Greenhouse Industry Today

- There are approximately 3500 acres of LSGF found mainly in Leamington, Kingsville, and to a lesser extent, Chatham-Kent.
- In Essex County these are bunched between the settlement areas of Kingsville and Leamington, and along the Highway 77 corridor between Leamington and Staples.
- In Chatham-Kent they are scattered widely throughout that municipality.
- The last 10 years has seen an annual growth of around 5 %.
- Primary crops are tomatoes, cucumbers, and peppers, but lettuce, eggplant, strawberries and other berries, melons and limes are being grown as well.
- There are approximately 10,000 migrant labourers in the Leamington, Kingsville and Chatham-Kent LSGF workforce. It is estimated that there are another 7,000 direct domestic employees.
- Challenges facing LSGF operations include managing the following processes:

- Material ordering lead times, particularly from offshore suppliers
- Supply chain constraints
- Worker Labour Market Impact Assessment (LMIA) approval process
- Land acquisition
- Negotiating supply of water, natural gas, and 3-phase hydro with utilities
- Municipal and other government agency permitting processes
- The reader is directed to the excellent Ontario Greenhouse Vegetable Growers (OGVG) website (<https://www.ogvg.com/>) for fulsome descriptions of all aspects of the Greenhouse industry.

2.6 Planning Documents

- The Ontario Planning Act controls land use, among other things, in Ontario.
- There is a hierarchy of land use policy documents as follows:
 - Provincial Policy Statement (PPS)
 - County of Essex Official Plan (COP)
 - Municipality of Lakeshore Official Plan (LOP)
- The LOP policies provide guidance to the Lakeshore Zoning By-law. It is in this document that the regulations concerning land use, such as Large Scale Greenhouse Farms (LSGF) are found.

- For the purposes of this study, LSGF's are considered to be an agricultural use, and therefore are consistent with the PPS, and in conformity with the COP and LOP.
- The Lakeshore Strategic Plan does not refer directly to agriculture or greenhouse development
- There are two strategic goals (SG) which have some relevance to greenhouse industry development:
 - SG 1.4 – encourages economic development and tourism and mentions upcoming update of the Municipality of Lakeshore Economic Development Strategy. Council / administration may wish to address potential greenhouse industry expansion in Lakeshore as part of that update.
 - SG 2.1 – speaks to the maintenance and upgrading of roads and other infrastructure. Access and local road improvements should be an important consideration of any LSGF development application.

2.7 Format

- Following this introduction are the following sections:
 - Consultation / Documents reviewed
 - Constraints / Opportunities to LSGF development in Lakeshore
 - Analysis of Effects
 - Proposed Official Plan and Zoning By-law Amendments
 - Conclusion

3.0 CONSULTATION / DOCUMENTS REVIEWED

3.1 Documents

- Greenhouse Development Feasibility Study, Agri-Development Kent – January 2001
- Agricultural Economic Impact and Development Study for Chatham-Kent, Essex and Kent Federations of Agricultural, August 2002
- Provincial Policy Statement
- County of Essex Official Plan
- Official Plans for Chatham-Kent, Leamington, Kingsville and Norfolk
- Town of Kingsville – Temporary Foreign Worker Housing Study, WSP, June 2022
- Municipality of Lakeshore Strategic Plan
- Multiple websites / articles

3.2 Consultation / Interviews

- Municipality of Leamington – Development Review Team
- Municipality of Lakeshore – various municipal departments, Economic Development and Engineering Services pending
- Chatham-Kent Planning Department – environmental planner, others pending
- County of Essex – Planning Department pending

- Ontario Ministry of Food, Agriculture, Food and Rural Affairs (OMAFRA) – policy planner pending
- Ministry of Transportation Ontario (MTO) – pending
- WSP – planning consultants for Lakeshore and Kingsville
- Citizen’s Group – Norfolk County
- Hydro One
- Enbridge
- Ontario Greenhouse Vegetable Growers – follow-up meeting pending
- Greenhouse builder / operator
- Canadian Renewable Energy Association (CanREA)

4.0 CONSTRAINTS / OPPORTUNITIES

- As noted in Section 2.4 above, serious constraints for LSGF developers included managing negotiations with utilities; land acquisition; and a timely municipal permitting process. This is discussed further in the following section.
- Both Hydro One and Enbridge have made applications to the Ontario Energy Board for new transmission lines, citing the need to service the expanding greenhouse industry in their Expressions of Interest.
- **Appendix “B”** indicates the following in regard to transmission facilities:
 - Chatham to Lakeshore Hydro One, the additional transmission line, enters Lakeshore just north of Tilbury, follows 401 more or less, passes through the north end of Comber, and terminates in a new switching

station located approximately at the intersection of CR 46 and Rochester Townline Road.

- Enbridge Panhandle Extension project enters Lakeshore south of Tilbury and terminates at the Richardson Side Road, halfway between CR 46 and Desimpel Road.
- Enbridge Leamington Interconnect runs from Staples, along CR 8, and connects to the Kingsville East Line, just east of the CR 27 intersection.
- Completion of these projects is expected to occur by the end of 2023 (Hydro One and Panhandle) or the end of 2024 (Leamington Interconnect). The provision of these enhanced utilities should result in increased opportunities for Large Scale Greenhouse development.
- At the time of writing, preliminary information suggests provision of municipal water and sewage systems will be a serious constraint. This part of the study will be updated once more is known.
- Highway 401 essentially bisects Lakeshore east to west and is easily accessed by a comprehensive County Road system.
- Highway 77 between Staples and Comber may be subject to severe access restrictions. Further information on this item is pending.
- Appendix B also depicts a “no build area” for LSGF’s. This is discussed under Greenhouse Effects, Section 5.

5.0 EFFECTS OF LSGF DEVELOPMENT

5.1 Financial / Economic Development

5.1.1 Multiplier Effects

- An important way of determining the impact on an economy subject to substantial new investment is called the Multiplier

Effect (ME). Generally, the greater this effect, the more positive the effect on an economy and is usually expressed through job creation and improved revenue streams.

- Research for this report did not uncover any definitive ME study for LSGF development.
- OGVG commented as follows – “the multiplier is a moving target, however provincially we approximate more than 2 billion dollars contributed to the Gross Domestic Product [GDP]. We are doing a research study which will assess this, expected to be complete by the fall of 2022.”
- The two agricultural economic impact studies from 2001 and 2002 listed in Section 3.1 both speak to an ME of 6.0, although there is no explanation provided for this number.
- Other analyses, which may not be wholly reliable, suggest a number of 2.5 to 4.0 based on certain aspects of LSGF – primary industry, food processing, reliance on sophisticated technology – which have been studied in other industries.
- There is anecdotal information that suggests a significant ME from LSGF investment.
- At the time of writing, input from the Lakeshore Economic Development department was pending.

5.1.2 Financial Impact on Municipality

- Similar to the Multiplier Effect, our research did not uncover any specific analysis on net impact of LSGF’s on municipal finances.
- LSGF’s are classified as an agricultural use and are subject to the same mill rate as a normal farm. The assessed value per acre of

LSGF's however are approximately 15 to 20 times of a normal farm, suggesting a substantial property tax revenue increase.

- Discussions with Leamington suggests costs incurred by the municipality and its ratepayers occur in the provision of municipal water and necessary road improvements and ongoing maintenance which are not fully covered by LSGF development.

5.1.3 Summary Financial / Economic Development

- Despite the lack of more precise statistics on the Multiplier Effect, what information does exist suggests LSGF's have a significant positive impact on local economic development.
- Similarly, it is assumed that the impact on municipal property tax revenue likely exceeds the cost to the municipality. Lakeshore should review the ability to fully recover costs, possibly through development charges, associated with the provision of municipal water (and possibly wastewater treatment). Also, Lakeshore should ensure that the cost of road improvements and maintenance associated with LSGF is covered through development agreements.
- Finally, it should be recognized that to some extent, Lakeshore already benefits from the LSGF development in Leamington and Kingsville as follows:
 - There is a probability that commercial / industrial enterprises in Lakeshore provide support services to the Leamington / Kingsville LSGF's.
 - It is estimated that roughly 50% of the property tax revenue presently generated by LSGF development goes to the County of Essex and the school boards, institutions which provide services to the ratepayers of Lakeshore.

5.2 Land Use Compatibility

5.2.1 Lighting

- The provision of lighting within a greenhouse facility can be a complex undertaking with impacts on the micro growing environment, depending on the crop being grown.
- As noted, Lakeshore Council directed Administration to undertake this report initially based on lighting complaints regarding existing facilities in Leamington and Kingsville.
- It is noteworthy that Leamington recently approved a nuisance by-law under the Municipal Act, with the support of the Ontario Greenhouse Vegetable Growers Association (OGVG) to require the abatement of interior greenhouse lights in existing facilities.
- It is generally accepted practice today that new greenhouse construction is equipped with the appropriate blackout curtains to ensure the desired light abatement relative to sensitive land uses, such as nearby dwellings, is achieved. For new construction, lighting abatement is reviewed and enforced through a site plan approval process under the Planning Act.
- The proposed Official Plan Amendment (**Appendix "C"**) includes policies (6.2.1(h)(v)(Vi)) requiring lighting mitigation.
- Given the above, the necessity for a Municipal Act nuisance by-law regarding lighting abatement, which in effect retro-actively applies to existing LSGF's, does not exist in Lakeshore where there are no existing greenhouse farms.

5.2.2 Odour

- The odour effect applies to cannabis operations.

- In an evidence brief, dated April 2018, Public Health Ontario stated that it could find no studies which showed exposure to cannabis odours resulted in effects on health.
- The draft Lakeshore Official Plan contains modern policies with regard to cannabis facilities, and as such, no further updating is considered necessary.
- Once the draft OP comes into effect, the Lakeshore Comprehensive Zoning By-law 2-2012 will be updated to reflect the new OP policies.
- Finally, it is our understanding that at present, there is no demand for new cannabis production facilities, unlike the growth being experienced in the LSGF section.

5.2.3 Girdling

- The Greenhouse Development Feasibility Study from January 2001, mentioned in Section 3.1 above, observes that the growth of the greenhouse farm industry in proximity to the Leamington / Kingsville settlement areas, in order to access municipal services, has had an undesirable “girdling” effect on the direction of expansion in those urban areas.
- In discussion with the Lakeshore Planning Department and the draft Lakeshore Official Plan consultant it was agreed that long term expansion of the primary settlement area, i.e., from CR22 to Manning Road, would be in a southerly direction towards CR42. As much as this area is presently designated Agriculture, it was further agreed that this area should be a “no build” area for Large Scale Greenhouse Farms, so as to avoid the girdling effect presently in the Leamington / Kingsville area.
- There was also discussion regarding creation of a “no build” zone along Manning Road between CR42 and 401. It is our

opinion there is insufficient justification for this restriction at this time, but suggest that the Municipality may wish to study this matter more closely in the future.

5.2.4 Employee Housing

- Housing for LSGF labour is tied to migrant workers' rights. Their rights are governed by many different federal and provincial laws, immigration rules, employment standards, labour laws, occupational health and safety standards, as well contracts and "common law".
- Specific legislation includes:
 - Employment Standards Act 2000 which applies to all Canadians, as well as migrant workers
 - Human Rights Code
 - Employment Protection for Foreign Nationals Act
- There are also a number of migrants workers' rights organizations.
- The reader is directed to the recently completed Temporary Foreign Worker Housing Study, by WSP and recently submitted to the Town of Kingsville (<https://kingsville-pub.escribemeetings.com/filestream.ashx?DocumentId=27387>). This report provides a comprehensive review of the many factors affecting migrant worker housing. It has been received by Kingsville Council and is now in its public consultation process component.
- It is our opinion the outcome of this process should inform Lakeshore Council on its ultimate policies regarding housing.

- For the purposes of the proposed official plan amendment (**Appendix “C”**), and based on discussions with various stakeholders and municipal planners, it is the default position at this time that all employee housing occur on the subject LSGF site.

5.2.5 Greenhouses and Wind Turbines

- After commencement of the study, it came to our notice that the site plan configuration of a larger new greenhouse development in Chatham-Kent had been altered after a complaint from a wind turbine operator on a neighbouring lot.
- This raised two questions:
 - Since the greenhouse project was subject to only site plan approval, which does not require any public notification, how did the wind turbine operator discover the project?
 - What was the rationale for the re-configuration? Third-hand information suggests it was due to the proximity of the proposed migrant worker housing facility. Direct confirmation of the process followed and the concern(s) that were raised by the Chatham-Kent Planning Department.
- There are 160 wind turbines in Lakeshore, mainly in Wards 5 and 6, which due to their rural nature, are most likely areas for LSGF development. Of these, 72 are north of 401, and 88 are south. Please refer to **Appendix “B”**.
- There are two items noted with respect to the individual wind turbine locations:
 - Each turbine has a 550-metre radius circle drawn around it, representing the accepted minimum distance required from a turbine for adequate sound attenuation from a sensitive

land use. It may be the position of the wind turbine operator that this should be the distance maintained by migrant worker housing.

- The lot on which each turbine sits is shown shaded on **Appendix "B"**. It is assumed that these lots will not be suitable for LSGF development.
- The Canadian Renewable Energy Association (CanREA), which represents the wind energy industry was consulted on this issue but it took no position.
- Three approaches were considered where existing wind turbines would be in close proximity to proposed LSGF's:
 - Do nothing. It is possible that any issues can be worked out with no need for a municipal land use planning policy.
 - Provide an official plan policy requiring consultation with the wind turbine operator / owner during the site plan approval process.
 - Provide actual LSGF setbacks from existing wind turbines in the zoning regulations, particularly for worker housing. There are no regulations in the Lakeshore Zoning By-law prescribing minimum distance separations between proposed sensitive land uses, such as dwellings, and existing commercial wind turbines.
- The CanREA representative supported the second option, and this has been incorporated in the proposed official plan amendment found in **Appendix "C"**.

5.3 Climate Change Goals / Objectives

- Section 1.8 of the Provincial Policy Statement, entitled Energy Conservation, Air Quality and Climate Change, begins with “Planning authorities **shall** [SSPL emphasis] support energy conservation and efficiency, etc...” – the key word “shall” makes this a mandatory PPS policy.
- The County of Essex Regional Energy Plan, 2019, has specific references to greenhouse development:
 - Efficient greenhouses is a Strategic Direction, the rationale being that “the greenhouse sector accounts for 38% of the energy consumed in Essex County...the greenhouse sector accounts for 41% of emissions and 15% of energy and municipal water costs”.
- Section 4.2.4, Energy Conservation and Generation, Air Quality and Climate Change Adaption of the Lakeshore Draft Official Plan contains up-to-date policies describing various ways the municipality can achieve climate action goals through the development approval process. These policies should be applied to greenhouse proposals.
- The environmental planner for Chatham-Kent, an expert on different ways to address climate change-related net zero goals was interviewed. Highlights, particularly related to LSGF’s were as follows:
 - Likely the best way to meet net-zero goals for greenhouses would be through on-site energy generation with the capability to feed back in to the grid.
 - LED lighting is a common “checklist” item most suitable for greenhouses.
 - Need to encourage life-cycle costing in energy model, not only the immediate impact.

- Referenced Town of Halton Hills Green Development Standards which requires Planning Act development applications to meet certain minimum climate action plan measures as a condition of approval.
- Use of incentives through Community Improvement Plan (CIP) - like policies to encourage net zero planning, for instance, in exchange for reduction in fees and property taxes. However special legislation is required for this approach.
- The SSPL opinion is that Lakeshore has the necessary climate change policies in the draft official plan, and no special greenhouse-related policies are necessary.

6.0 PROPOSED OFFICIAL PLAN POLICES AND ZONING REGULATIONS

- The proposed Official Plan Amendment (OPA) is based on the draft Large Scale Greenhouse Farm policies for the Town of Kingsville, awaiting approval by the County of Essex. These policies have been subject to agency circulation and have been thoroughly vetted. Please refer to **Appendix "C"**.
- The proposed zoning regulations (ZBA) are based on those of Chatham-Kent, which are the most recent. The proposed regulations are subject to the OPA policy regime proposed above, and will be subject to substantial further review depending on reaction to the proposed OPA. Please refer to **Appendix "D"**.
- It should be noted that the proposed OPA and ZBA are considered as starting points for discussion and not recommendations. Agency, stakeholder, and public consultation, could well result in substantial change to the documents that are ultimately recommended to Council.
- Following are the impacts of the review of the various Effects outlined in Section 5 on the proposed official plan policies and zoning regulations.

- Financial – no reason to address the potential for economic development or property tax impact in the Official Plan or Zoning By-law but consideration should be given to LSGF's in the proposed update of the Strategic Plan.
- Land use compatibility – Lighting:
 - Official Plan – subject to site plan approval; must be dark-sky compliant; 300 metre setback from sensitive land uses can be reduced subject to acceptable mitigation of undesirable impact on sensitive land uses.
 - Zoning By-law – 300 metre setback in existing by-law is maintained.
- Land use compatibility – Odour
 - Official Plan – proposed draft policies are satisfactory
 - Zoning By-law – references to “Marihuana for Medical Purposes” are replaced by the most recent legislation “the Cannabis Act”.
- Land use compatibility – Girdling
 - Official Plan – lands designated Agriculture that will eventually be subject to long term settlement area expansion of urban uses have been identified and are proposed as “no build” areas for LSGF's.
 - Zoning By-law – although not presently included in the proposed ZBA, assuming the “no build” approach in the OPA is ultimately recommended, then an exception Ag zone will be necessary where a LSGF is specifically not a permitted use.
- Land use compatibility – Employee housing
 - Official Plan – initial position is that all migrant worker housing should be located on-site. However, final disposition in Kingsville of the

Temporary Farm Worker Housing Study can influence revisions to this policy prior to Lakeshore Council consideration.

- Zoning By-law – will require facilities for migrant worker amenities. Otherwise, it is expected the proposed by-law will be affected by what transpires in Kingsville, as noted above.
- Land use compatibility – Wind turbines
 - Official Plan – proposes need for LSGF operation to consult with commercial wind turbines owner / operator as part of site plan approval process.
 - Zoning By-law – no effect.
- Climate Change Goals / Objectives – at this time, special policies in this regard are not necessary. Lakeshore simply needs to apply the draft Official Plan policies found in Section 4.2.4. Similarly, there is no additional or revised regulations proposed in the zoning by-law.

7.0 CONCLUSION / SUMMARY

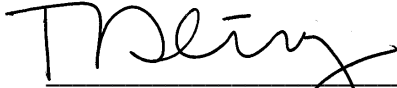
- Through document review and interviews SSPL was able to assemble information sufficient to provide a reasonable description of the Large Scale Greenhouse Farm industry and its possible effects on land use planning.
- Having said that, it is recognized that at the time of writing, the preparation and outcomes of important related studies – Kingsville Migrant Worker housing and LSGF economic impact by the Ontario Greenhouse Vegetable Growers – were still in the works, and that these reports could influence policies suggested in the official plan and zoning amendments.
- Also, it is recognized that important documents – the Kingsville Official Plan update, particularly the portion regarding Large Scale Greenhouse Farms and the draft Lakeshore Official Plan – are still awaiting approval by the County of

- Essex, and the final version of these documents, if revised from the draft versions, could also affect suggested Official Plan policies.
- The most important sources of information influencing the suggested policies were the interviews with the Ontario Greenhouse Vegetable Growers, the Leamington development review team and the Kingsville Planning Department. These three represented the actual industry experiences over the past several decades both from the private stakeholder perspective and that of the public interest.
 - Further planned interviews, document review, and agency, stakeholder and public consultation, are scheduled and will likely influence further iterations of this report and final recommendations to Council.
 - Two issues raised consistently by several groups, but considered outside of the scope of this report iteration were as follows:
 - OGVG, on behalf of their members, and the one LSGF operator interviewed, requested that steps be taken from the municipal perspective to improve the municipal permitting system.
 - OGVG, Leamington, Enbridge, Hydro One, ERCA, in particular, raised the advantage of creating a LSGF business park, reducing risks to LSGF developers and providing much greater efficiency in the provision of services and utilities and municipal permitting. Improvements to municipal infrastructure benefitting other residents / businesses in Lakeshore and implementing of climate action plans were also raised as benefits.
 - Next steps:
 - August 23 – virtual presentation of updated report and in-person open house meeting at the Atlas Tube Centre – 6:00 to 7:30 pm
 - September 2 – submission of first report

Lakeshore Greenhouse Study
July 15, 2022

- September 13 – report presentation including recommendations at Council meeting

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Attachments:

- Appendix A – Study Terms of Reference Report
- Appendix B – Constraints / Opportunities
- Appendix C – Proposed Draft Official Plan Amendment Policies
- Appendix D – Proposed Draft Zoning By-law Amendment Regulations

APPENDIX "A"

EXCERPTS FROM

LAKESHORE GREENHOUSE STUDY

TERMS OF REFERENCE

DECEMBER 22, 2021

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STOREY SAMWAYS PLANNING LTD.

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LAKESHORE GREENHOUSE STUDY

TERMS OF REFERENCE

1.0 INTRODUCTION

1.1 Overview

In 2019 Council for the Municipality of Lakeshore, reacting to public complaints in other Essex County municipalities where there was substantial greenhouse development, directed Lakeshore Administration to bring back a report regarding a light pollution by-law relating to greenhouses." This led to a series of reports and further direction culminating in an Interim Control By-law (ICBL) being passed prohibiting the development of greenhouses pending receipt of a study outlining the "effects of greenhouse activity, and how best to deal with these effects."

In April 2021, Storey Samways Planning Ltd. (SSPL) was retained by Lakeshore Administration to prepare a Terms of Reference (ToR) for the subject study, combined with a project proposal for its preparation. The ToR are in effect embedded in the study proposal. It should be noted that at the time of writing there are no greenhouses¹ in Lakeshore (as defined in the footnote below), nor are any contemplated to the best of my knowledge. Therefore, any recommendations for mitigating or eliminating negative greenhouse impacts will not have to deal retroactively with existing facilities such as is the case in Leamington and Kingsville.

1.2 Purpose

The purpose of this report is as follows:

- Identify the possible effects / impacts of greenhouse development

¹ For the purposes of this report the definition of the term "greenhouse" is that found in the Lakeshore Zoning By-law for "Greenhouse Farms – shall mean an agricultural use in which the predominant economic activity involves the growing of plant materials in large scale greenhouses, for which the use comprises a minimum of 2.0 hectares, for subsequent replanting or sale."

- Prepare a study process that includes comprehensive stakeholder and public consultation in the preparation of the report with recommendations on ways to mitigate or eliminate undesirable greenhouse effects

1.3 Chronology

- December 10, 2019 – Council resolution regarding greenhouse light pollution
- November 27, 2020 – at the request of Administration, SSPL submits report regarding the nuisance effects from greenhouse and cannabis facilities
- December 15, 2020 – Council adopts recommendations of December 7, 2020 T. Ryall report that ICBL preventing greenhouse development be prepared and study undertaken
- March 9, 2021 – ICBL is passed
- April 26, 2021 – SSPL and Administration meet to discuss ICBL and study. SSPL was retained to prepare ToR for the study, as well as project proposal, budget and schedule.
- May 13, 2021 – T. Ryall provides outline for study Terms of Reference (ToR)
1.4 Format

Following this Introduction, this report is broken down into the following sections:

- Analysis – based on high-level environmental scan, what are the discernable effects of greenhouses, and what tools exist to deal with these effects.
- Research Approach – what documents, agencies, and individuals will provide the background information necessary to appropriately assist Council in its decision-making

2.0 ANALYSIS

Prior to preparation of this report an environmental scan of the experiences related to cannabis and greenhouse facilities in certain municipalities was

completed. Based on that scan, the most prominent effects, and tools used to mitigate those effects, were identified.

2.1 Greenhouse Effects

Those effects proposed for study are as follows:

- Financial
- Land use compatibility
 - Lighting
 - Odour
 - Girdling (the effect of constraining settlement area growth)
 - Employee housing
- Climate change goals / objectives – utilization of advanced technologies to achieve net-zero emissions

2.2 Municipal Regulatory Tools

The Planning Act has typically provided the tools most often used by municipalities to study and mitigate undesirable greenhouse effects as follows:

- Policy Guidance – use of lower and upper tier official plans
- Regulatory – use of zoning by-laws, including ICBL's and Holding By-laws
- Agreements – use of development agreements, primarily through site plan control
- The study will also look at the potential for other Planning Act tools such as Community Improvement Plans

The study will also review nuisance provisions under the Municipal Act, which have also been used as a regulatory tool.

3.0 PRIMARY RESEARCH APPROACH

Based on the environmental scan, primary research will consist of, but will not necessarily be limited to, the following:

- Review of Planning Documents – Provincial Policy Statement; Official Plans and Zoning By-laws of Lakeshore and other municipalities; County of Essex Regional Energy Plan; special planning studies related to greenhouse-related issues by other municipalities²
- Review of Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) and Ontario Professional Planners Institute (OPPI) documents / webinars
- Review of Tribunal Decisions – Ontario Land Tribunal (formerly Ontario Municipal Board / Local Planning Appeal Tribunal); and Normal Farm Practices Protection Board (NFPPB)
- Review of various literature sources
- Interviews with the following:
 - Municipal and government planners experienced with greenhouse development, namely, Chatham-Kent, Kingsville, Norfolk County, County of Essex, Lakeshore, Ministry of Municipal Affairs and Housing, OMAFRA
 - Ratepayer groups, such as exists in Norfolk County
 - Industry representatives from the Ontario Greenhouse Vegetable Growers Industry Association
 - An individual greenhouse grower company

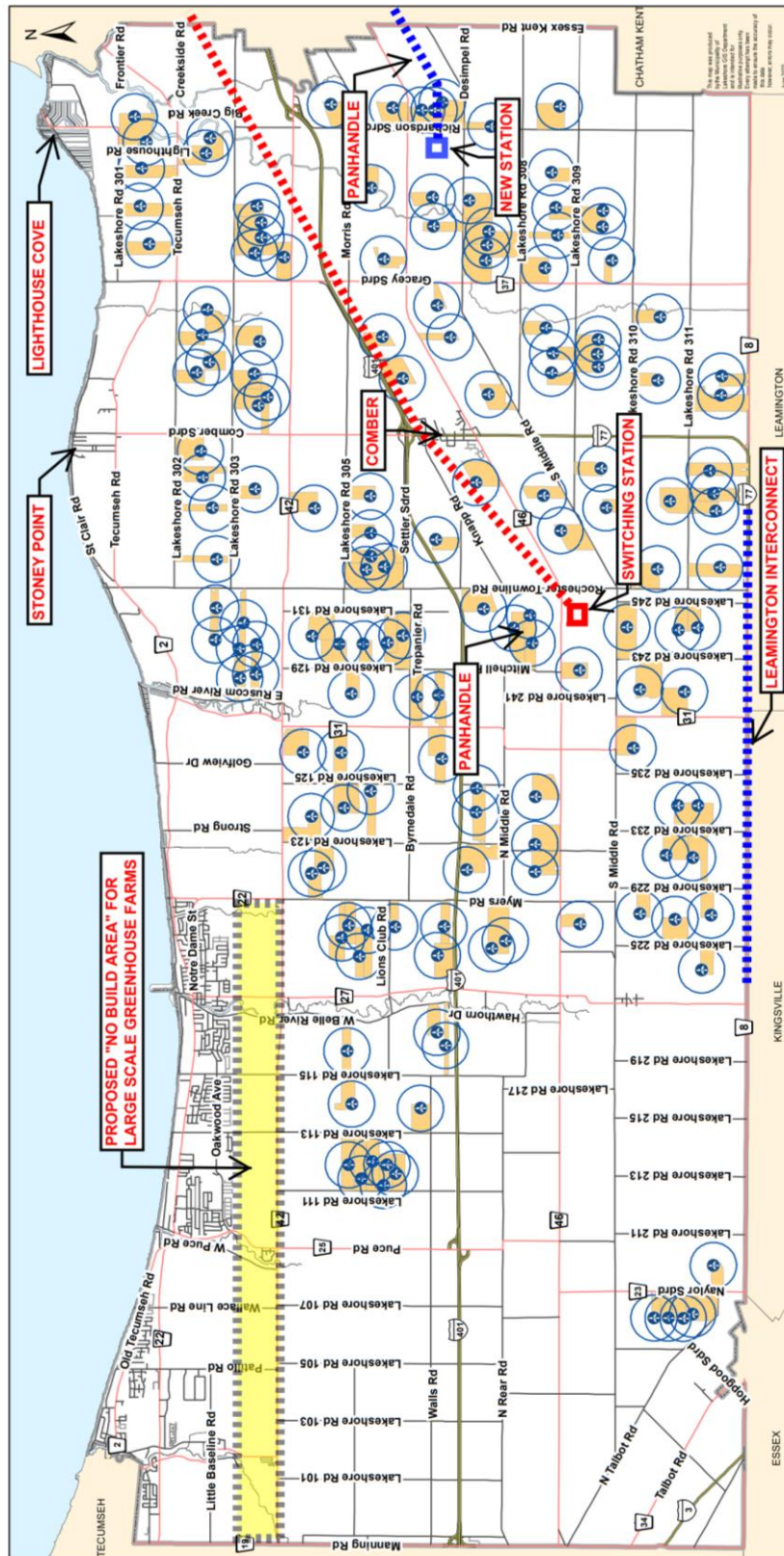
As well, it should be noted that input from the separate stakeholder and public Public Information Centres (PIC's) will form part of the research reported in the final submission.

² It is anticipated the “other municipalities” will be Chatham-Kent, Leamington, Kingsville, and possibly Norfolk County.

APPENDIX "B"

CONSTRAINTS / OPPORTUNITIES

APPENDIX "B" - CONSTRAINTS / OPPORTUNITIES



APPENDIX "C"

LAKESHORE GREENHOUSE STUDY

PROPOSED OFFICIAL PLAN POLICIES

JULY 2022

PREPARED BY:

STOREY SAMWAYS PLANNING LTD.

Details of the Amendment

Section 3.3.11 "Agricultural Area" is hereby amended by the revision of the following:

1. Amending Section 3.3.11, paragraph one, to include large scale greenhouse farms as an agricultural use.
2. Amending Section 3.3.11 item d) by adding the words "including large scale greenhouse farms" after the word "uses"

Section 6.2 "Agricultural Designation" is hereby amended as follows:

1. Amending Section 6.2.1 Permitted Uses item a) to include "large scale greenhouse farms" as a primary use of land.
2. Deleting Section 6.2.1 h) and replacing with the following:

"6.2.1 h) – Large Scale Greenhouse Farms (LSGF) permitted in the Agricultural designation shall be subject to the following policies:
 - i) specific development standards as outlined more specifically in the Zoning By-law;
 - ii) LSGF are subject to Site Plan Control in accordance with Section 8.3.4;
 - iii) LSGF shall be required to locate all supporting buildings, structures, including but not limited to, loading, packing, water storage, housing, stand-by power systems, chillers, CO² systems and waste disposal containers as to maximize the separation distance to a sensitive land use;
 - iv) LSGF shall be prohibited on all lands designated Agriculture north of County Road 42 and west of the north leg of County Road 22;

- v) LSGF shall be designed to mitigate any impact resulting from the use of supplementary grow lighting through the use of wall and ceiling light abatement curtains;
- vi) LSGF shall be required to provide a photometric plan for all exterior lighting and demonstrate that all fixtures are full cut-off and dark sky compliant;
- vii) LSGF shall be designed to mitigate the impact of any odours generated from the growing of or processing of cannabis;
- viii) LSGF shall demonstrate that all necessary services are available to the property to be developed;
- ix) LSGF internal recycling of fertigation water shall be required in order to reduce primary water use. A water recycling plan shall be prepared and submitted as part of any servicing plan;
- x) the use of well water as the primary source of irrigation water in a LSGF should be discouraged, however if used, the Municipality will require the property owner to provide copies of all applicable MECP water taking permits;
- xi) notwithstanding item x) the Municipal may also require that the LSGF demonstrate through the completion of a hydrogeological review that the use of well water will not negatively impact on the affected aquifer(s).
- xii) LSGF development shall be required to demonstrate no negative impact to traffic and provide safe access to the subject property in accordance with Municipal and County Road standards;
- xiii) LSGF development shall be responsible for any necessary road upgrades as determined by the Municipality or County of Essex;
- xiv) LSGF proposed adjacent of a lot with an existing commercial wind turbine are required to consult with the wind turbine operator and provide confirmation and comment from said consultation;
- xv) LSGF development will be encouraged to locate in close proximity to roads with direct access to Highway 401;
- xvi) LSGF shall demonstrate that they are providing sufficient labour housing for the crop(s) being grown. Such labour housing shall be provided wholly on the same property as the LSGF.
Notwithstanding, labour housing may be provided off-site but must be in compliance with the Lakeshore Zoning By-law and must

- demonstrate that adequate, safe and appropriate transportation is provided to the LSGF site(s);
- xvii) LSGF shall be encouraged to provide active transportation linkages to existing and future active transportation corridors including the CWATS and Chrysler Greenway;
 - xviii) Stormwater management systems will be required to demonstrate conformity to regional stormwater requirements. The Municipality may require the development of a regional stormwater management plan and universal release rate;
 - xix) LSGF site plan agreement shall include provisions for regular maintenance and function confirmation as outlined by ERCA.
 - xx) All LSGF will require on-site water storage and installation of rate-of-flow control facilities. Rate-of-flow will be established by the applicable water provider and subject to inspection by the Municipality;
 - xxi) LSGF shall be designed and oriented as to maximize buffering between it and sensitive lands uses to minimize or mitigate adverse effects as defined in Provincial Policy Statement and detailed in ERCA's Environmental Assessment Guidelines. Generally, "adverse effect" can be summarized as impairment of the quality of the natural environment; injury or damage to property, plant, or animal life; harm or material discomfort to any person; an adverse effect on the health of any person; impairment of the safety of any person; rendering any property or plant or animal life unfit for human use; loss of enjoyment or normal use of property; and interference with normal conduct of business.

APPENDIX "D"

LAKESHORE GREENHOUSE STUDY

PROPOSED ZONING BY-LAW REGULATIONS

JULY 2022

PREPARED BY:

STOREY SAMWAYS PLANNING LTD.

Municipality of Lakeshore

By-law 00-2022

**Being a By-law to amend By-law 2-2012,
Zoning By-law for the Municipality of Lakeshore
(ZBA-00-2022)**

Whereas By-law 2-2012 is the Municipality's comprehensive zoning by-law regulating the use of lands and the character, location and use of buildings and structures within the Municipality of Lakeshore;

And whereas the Council of the Municipality of Lakeshore deems it expedient and in the best interest of proper planning to further amend By-law 2-2012;

And whereas this amendment will conform to the Lakeshore Official Plan upon the coming into effect of proposed Amendment No. 1 to the Official Plan;

Now therefore the Council of the Municipality of Lakeshore enacts as follows:

1. That Section 4.0 Definitions, Item 5, be amended by deleting the words "a marihuana for medical purpose" and replacing with "cannabis";
2. That Section 4.0 Definitions, Item 99, be amended by adding the following after the word "materials": "growing or storage of vegetables, shrubs, plants or flowers";
3. That Section 4.0 Definitions by adding a new definition between Item 78 and 79 as Item 78.1:

Farm Worker Housing means a building or structure designed or converted for the housing of workers required by a permitted agricultural use.

4. That Section 4.0 Definitions by adding a new definition between Item 99 and 100 as Item 99.1:

“Greenhouse Farm, Large Scale means a building or structure whose roof and sides are made largely of glass or other transparent or translucent material, in which the temperature and humidity can be regulated for the cultivation of delicate or out-of-season plants, and which is 2 ha (5acres) or greater in area.”

5. That Section 4.0 Definitions. Item 129.1 be amended by deleting, “Marihuana for Medical Purposes” in the title and replacing with “Cannabis” and by deleting the wording after the word “under” and replacing with “the Cannabis Act, as amended or replaced by successor legislation.”
6. That Section 6.23 by retitled Large Scale Greenhouse Farm Regulations and Definitions and the section amended as follows:

Add the following Subsection titled Definitions and include the following:

The following definitions apply to greenhouse facilities in the Corporation and are provided for clarification purposes during site plan approval;

Buffering and/or Separation may include the use of fencing, Provincial or Federal separation standards, berming or screening

Landscaped Open Space shall consist of a combination of grass, trees, shrubs, flowers and other features illustrated in an approved site plan

Outdoor Amenity Space is considered any green space capable of accommodating recreational space for items such as sports fields, walking paths or picnic areas.

Sensitive Land Use, for the purpose of greenhouse development means any non-accessory or off-site residential use, natural heritage feature, as defined in Provincial Policy Statement, institutional use, park land or active recreational facilities

Subsection a) iv) is amended by deleting “15 m” and replacing with “5 m”;

Subsection a) v) is amended by deleting “80%” and replacing with “as outlined on an approved site plan”;

Subsection a) vi) be added as follows: Landscaped open space – 20% minimum of the required front yard setback area

Subsection b) be amended as followings:

Adding the words, “Settlement Area Boundaries or sensitive land use” after the word “Zones”, and;

by adding the following wording after “300m.”, “Notwithstanding the 300 m setback may be reduced if the proposed development can demonstrate that enhanced mitigation measures, satisfactory to the Municipality, are provided.

Subsection c) be deleted and replaced with the following. “All worker housing will include provisions for outdoor amenity space which will accommodate recreational areas such as pathways, sports fields or picnic areas. The specific details shall be as outlined on an approved site plan.”

Subsection d) is amended by deleting d) and replaced with the following:

Loading dock areas shall be located a minimum of 100 m from the nearest dwelling on a separate lot and shall utilize screening and buffering to mitigate any light and noise impact;

Subsection e) and f) are amended by replacing “7.5 m” with “10 m”;

Subsection g) is deleted and replaced with the following:

“Storm water management ponds:

- i) shall be located as outlined on an approved site plan but at no time closer than 6 m to any lot line;
- ii) shall not be located closer to the top of bank of a municipal drain or open water course than approved by the Municipality and Essex Region Conservation Authority.”

Subsection i) is amended by adding the words “and screened from view”

7. That Subsection 6.32.1 be retitled by deleting the wording “marihuana for medical purposes” and replacing with “Cannabis”
8. That Subsection 6.32.1 items a) through as required to delete the words “medical marihuana” and replace with “cannabis”
9. That Subsection 6.41.1 Parking requirements be amended by replacing the current parking standards with the following:
 - 1 space per 2 ha of growing area, plus
 - 1 space per 30 sq. m of office space, plus
 - 1 space per loading dock
10. That Subsection 6.41.3 Loading Regulations be amended by adding Item h) Large Scale Greenhouse Farms – 1 space per 5 ha of growing area or as shown on an approved site plan.
11. That Section 7.1 b) Permitted Uses is amended by adding Large Scale Greenhouse Farm” as a permitted use in the A, Agriculture Zone.
12. This by-law shall come into force and take effect from the date of passing by Council and shall come into force in accordance with Section 34 of the *Planning Act*, R.S.O. 1990, c. P. 13.

Read and passed in open session on September __, 2022.

Mayor
Tom Bain

Clerk
Kristen Newman