

An aerial photograph of a coastal area, showing a mix of green land and light-colored water or sand. A dark, irregular shape, possibly a pond or a shadow, is visible in the upper right. The image is partially covered by a green overlay on the left and bottom right, and a solid orange bar at the top.

SHORELINES & SHORE LANDS:

Planning for Coastal Resilience
in Prince Edward County

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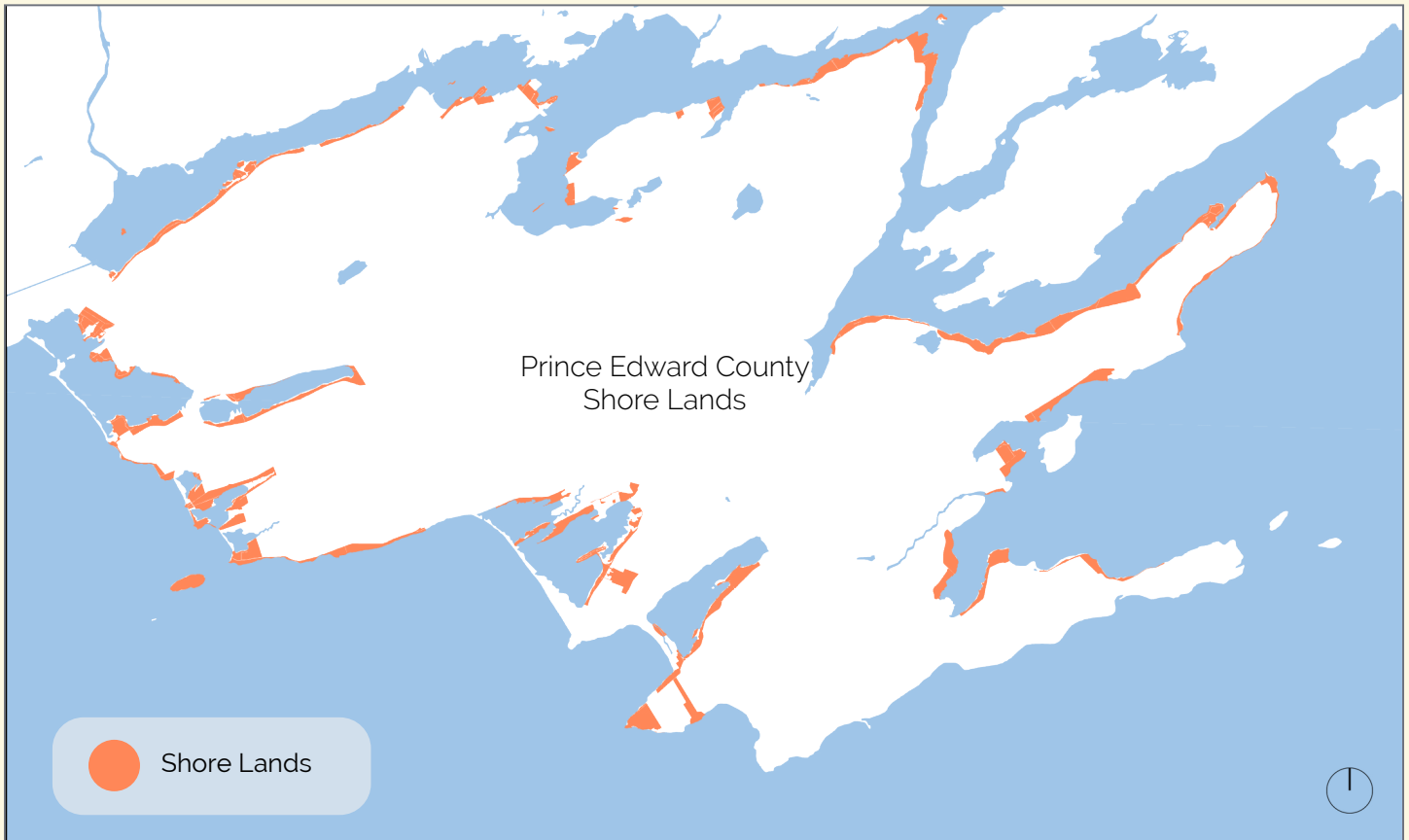
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EXECUTIVE SUMMARY



Map 1: Prince Edward County Shore Lands land use designation

Prince Edward County (the “County”), Ontario is facing immense pressure from tourism and development growth. Nowhere are these pressures more evident than along the County’s shoreline. Rapid growth has threatened Prince Edward County’s traditional rural character and local environment. Adding to this, development along the shoreline has created challenges in maintaining public access to water. Many of these tensions are located within the County’s Shore Lands designation. This land use designation contains a broad range of uses including residential, agriculture, and tourism-related commercial uses. Shore Lands cover much – but not all – of Prince Edward County’s shoreline.

As part of the *Official Plan* review process, Prince Edward County is re-evaluating the role of the Shore Lands. Recommendations from this report can be used to inform council, municipal staff, or any third-party consultants, of how the Shore Lands may be adapted to better meet the objectives outlined in the *Official Plan*.



Process

Recommendations for Shore Lands were informed through context analysis, spatial analysis, and case studies. Context analysis identified the key tensions which exist along Prince Edward County's shoreline – real estate development, access to water, tourism, and rural character. Spatial analysis and mapping were used to understand the shared characteristics of the Shore Lands and how the key tensions manifest in and around the Shore Lands. Lastly, comparative case studies were used to determine potential planning tools and guide application recommendations.

Recommendations for the Future of the Shore Lands Designation

The Shore Lands designation is a powerful tool that should be kept in Prince Edward County's *Official Plan*. The designation provides flexibility in the County's approach to development along its shoreline and allows it to incorporate important considerations such as maintaining public access to water. This report outlines two steps to improve the designation:

Specific **inclusion criteria** to determine which areas should be retained within the Shore Lands designation.

The introduction of **overlay zoning** in the areas designated as Shore Lands. These recommendations enable development in the Shore Lands to follow enforceable requirements that are specific to the site context and the proposed use and intensity.



Inclusion criteria can be prioritized into **Core Criteria** and **Secondary Criteria**. The inclusion criteria can be coordinated with context specific development standards to promote compatible development patterns.

Inclusion Criteria

A set of seven inclusion criteria were developed to evaluate existing areas within Shore Lands and identify whether they have a strong or weak planning rationale for continued inclusion within the designation:

1. Level of service by Municipal Infrastructure
2. Level of overlap with Natural Assets
3. Risk from Natural Hazards
4. Proximity to Agricultural Uses
5. Potential for Water Access
6. Degree of Aquifer Vulnerability
7. Proximity to Tourism Corridors

Plans for a phased approach and prioritization of the criteria are specified in the report to provide council and staff with the tools to weigh each criterion and guide decisions.

Recommended Tool

This report recommends the use of overlay zoning to establish clear, context-specific, and enforceable guidelines for development within the Shore Lands. Overlay zoning is an effective tool that can be incorporated into Prince Edward County's existing zoning framework.

To address the need for context-specific development, the report proposes the use of three streams within the Shore Lands overlay zoning, based on proposed use and intensity. The three streams are residential, low-impact commercial (tourism) and high-impact commercial (tourism). Each stream can be used to specify context-specific design requirements. Overlay zoning design requirements can expand upon the County's existing *Design Policies for Shore Lands*, with additional specific requirements that address identified challenges and opportunities within Shore Lands, such as shoreline protection, erosion, and aquifer vulnerability.





Cover Photo Source: Google Maps (2021)
Photo Source: Wandering Wagars (2021)

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1.0 INTRODUCTION

1.1 Prince Edward County

Prince Edward County (PEC; the County) is a single-tier municipality located in southeastern Ontario. It is surrounded by 500 km of coastline along the northeast shore of Lake Ontario.¹ The municipality has nine diverse regions, which are characterized by vast farmland, clusters of small hamlets and villages, Sandbanks Provincial Park, and three main towns — Picton, Bloomfield, and Wellington.² PEC has a permanent resident population of approximately 23,000, but welcomes approximately 492,000 domestic tourists throughout the year.³

The County, including its distinct shoreline, has been home to the Anishnabek Nation and Haudenosaunee Confederacy, Kanyen'kehá:ka of the Tyendinaga Mohawk Territory and adjacent Wendat since time immemorial.

¹ Visit Prince Edward County, "The County | Explore the Region's Wine, Food, Art and More."

² Ibid.

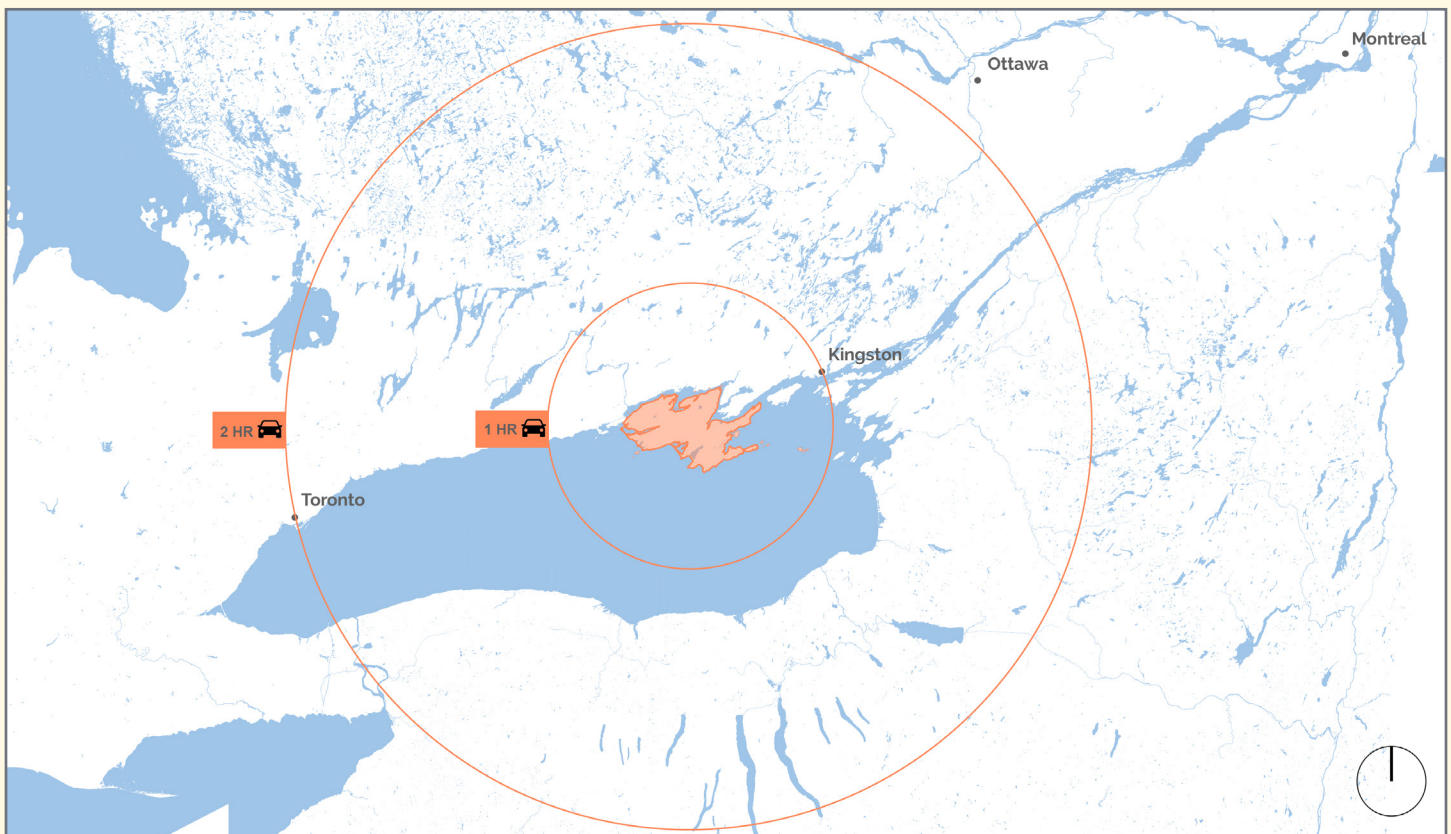
³ Prince Edward County, "Destination Development Strategy."

PEC has unique natural, historical, and cultural heritage features that have attracted a creative rural economy of winemakers, artists, farmers, and entrepreneurs. This has helped to foster a bustling tourism sector, while simultaneously posing various challenges for the PEC community at large. These challenges include rapid residential and commercial development in response to increasing demand, which has contributed to rising land values.⁴ Housing affordability has become a growing concern in the County: According to Prince Edward County Affordable Housing Corporation's *2021 Annual Report*, house prices went up by 49% year-over-year between 2020 and 2021, while the average rental price increased by 38% over the same period.⁵

The County recognizes the importance of tourism, the role of the natural environment,

⁴ The Corporation of Prince Edward County, "Committee of the Whole—29 Apr 2021—Agenda."

⁵ Ibid.



Map 2: Prince Edward County in context, located in close proximity to several major urban centres in Ontario and Quebec.

and the need for developing in a sustainable and equitable manner. However, rapid development has pushed PEC into a progressively more vulnerable position between existing environmental concerns and impacts. Environmental concerns in the County include groundwater availability, erosion of natural and agricultural lands, and a decrease in protected areas, which can all contribute to the compounding presence of climate change in the region.⁶ These environmental concerns have the potential to contribute to the predicted increasing shifts in weather systems, droughts and flooding, and temperature irregularities.⁷

1.2 Objectives

Prince Edward County's new Official Plan, effective as of July 2021, outlines a variety of land use designations to balance different types of land uses and meet the County's vision and objectives. Among the land use designations

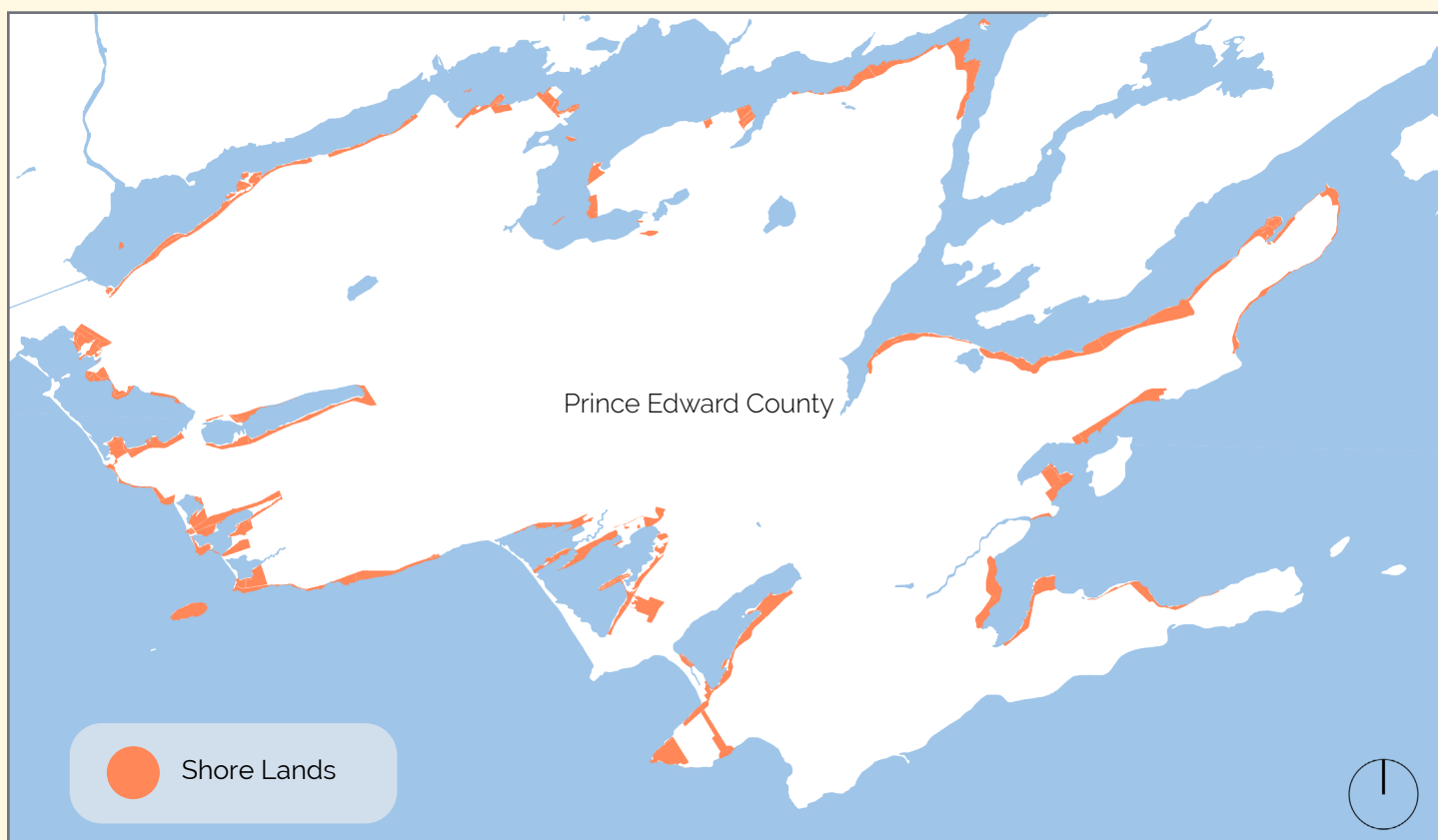
⁶ Chin et al., "Exploring Tourism Businesses' Adaptive Response to Climate Change in Two Great Lakes Destination Communities."

⁷ Gronewold et al., "Coasts, Water Levels, and Climate Change."

is Shore Lands, which permits a wide range of uses including low density residential uses, private and public open spaces, existing agricultural uses, public uses and commercial uses on the waterfront. The Shore Lands designation is expected to serve the "projected seasonal and recreational growth needs of the County," and allows for a wide range of commercial uses, such as resorts, tourist businesses, water-related businesses, and other uses that primarily serve the County's tourist population.⁸

The Shore Lands designation covers much, but not all, of the County's vast shoreline. A review of the designation was required to understand where and how the Shore Lands designation could best be used to contribute to the objectives laid out in Prince Edward County's

⁸ County of Prince Edward, "Official Plan," 101–2.



Map 3: The Shore Lands designation covers much — but not all — of Prince Edward County's shoreline.

2021 Official Plan. As such, the primary objective of this report is to provide recommendations to the County as to how to best manage the changing context of the County's Shore Land designation and to explore and consider policy alternatives for the long term, in the context of both climate resilience and the creative rural economy.

1.3 Methods

Our process began with a **context analysis** of the issues and challenges facing Prince Edward County as a whole, and then focused on how these were manifesting within Shore Lands. We divided this analysis into three research themes: 1) agriculture, economic development, and tourism 2) environment and coastal resilience 3) housing, development, and demographics. Our full **context analysis** report can be found in Appendix 4. This was informed by a review and analysis of media, reports, municipal and provincial policies and plans. The project team also conducted a **site visit** to gain a firsthand understanding of the Shore Lands designation and its relationship to the rest of the County.

We then conducted a **comparative case study analysis**. This analysis was based on our research question: *How do other municipalities in North America use land use planning tools to reconcile the competing pressures of tourism, land development, and environmental protection along shorelines to foster resilient communities, economies, and ecosystems?* We narrowed our focus to include case studies where local municipal or regional governments utilized various planning tools to regulate development activity on their shoreline. We further specified that the planning tool must have clearly defined inclusion and/or exclusion criteria, as well as policy objectives grounded in resilience or sustainability. Case studies were selected based on similar characteristics to PEC, namely, a clear tension between economic development (including real estate and tourism) and environmental protection.

We then undertook an exploratory, multi case study approach to provide the most holistic and illustrative analysis.⁹ Ultimately, this allowed us to compare the outcome of each case study

⁹ Boblin et al., "Using Stake's Qualitative Case Study Approach to Explore Implementation of Evidence-Based Practice."

with regard to resilient shoreline management and the potential application to PEC. The guiding questions that have been embedded in our methods are outlined in Appendix 2.

Parallel to the **comparative case study analysis** and **context analysis**, we conducted a detailed **spatial analysis**. This was conducted to examine how characteristics informed by data intersect across Prince Edward County, particularly within Shore Lands. Data from sources including Prince Edward County, the Province of Ontario, and Quinte Conservation were examined, with an emphasis on data concerning existing land use planning designations, environmental features, infrastructure, and development characteristics was considered through this analysis. This data was chosen as it was aligned with the **key tensions** that were identified through the **context analysis**. Data was compiled and analyzed using Esri ArcGIS Pro, with additional analysis and processing conducted with Microsoft Excel. A full list of data sources can be found in the Bibliography section.

The **spatial analysis** was guided by the fundamental question: *What are the shared characteristics of the areas designated as Shore Lands in Prince Edward County?* An understanding of the shared characteristics of the areas designated as Shore Lands was necessary to determine the current state and use of these areas, as well as whether the Shore Lands designation is appropriate for these areas or if it is more appropriate to redesignate them (or a portion of them). A secondary question was: *In what ways do the **key tensions** identified in the **context analysis** manifest in and around areas designated as Shore Lands in Prince Edward County?* This question allowed us to identify **Hotspot Regions** – areas where many of the **key tensions** overlap. The spatial and context analyses were conducted in tandem, with findings of each informing and reinforcing the findings of the other.

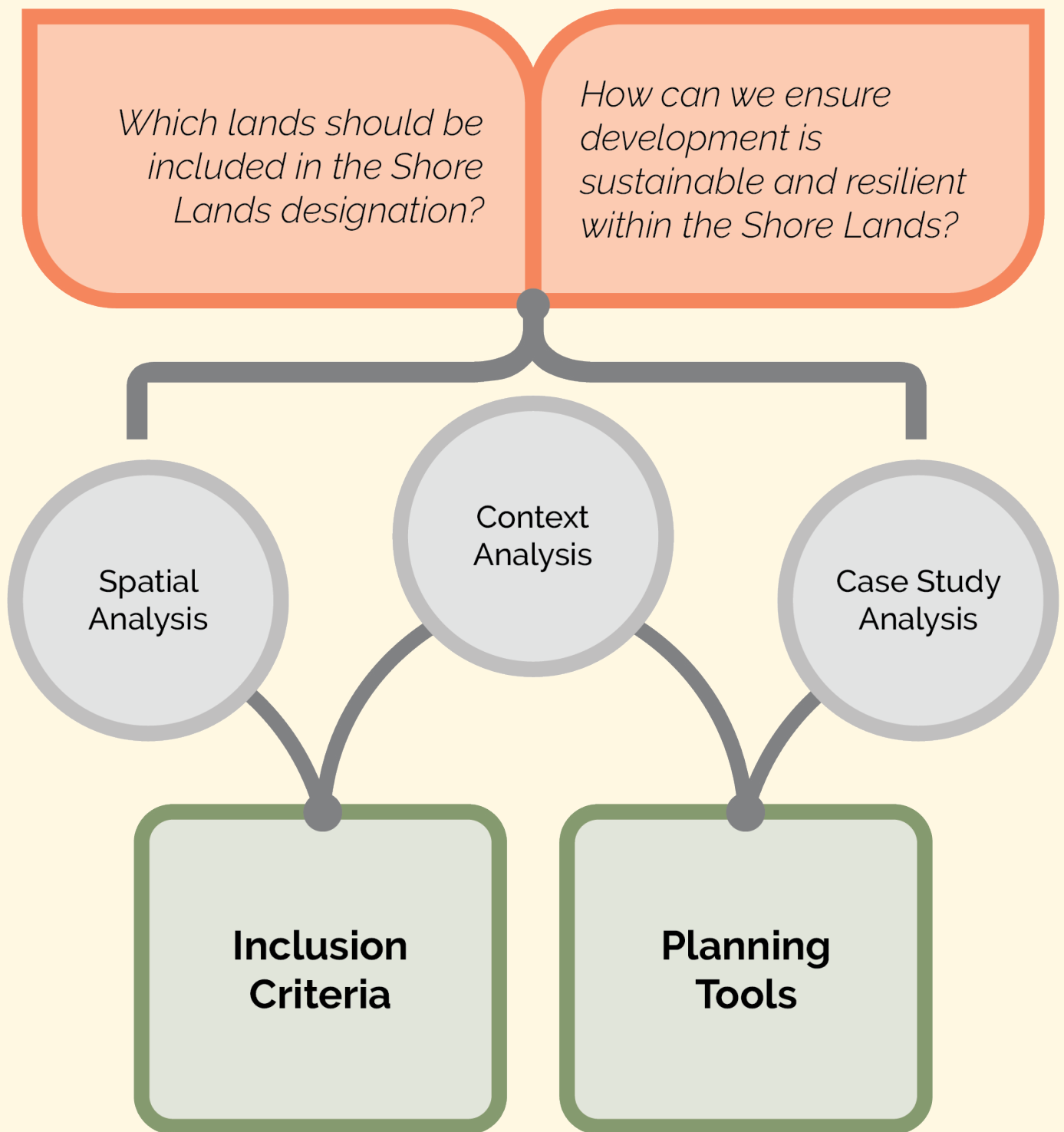


Figure 1: Guided by two primary questions, we undertook a spatial analysis, context analysis, and case study analysis, which informed our two-part recommendation on how to refine the Shore Lands designation.

2.0 CONTEXT

2.1 Problem Definition

The **context analysis** solidified the importance of the Shore Lands for the County (detailed **context analysis** can be found in Appendix 4). Given their location at the water's edge, they are home to significant natural assets that need to be protected, but are also some of the most desirable places to live and visit. These areas are therefore experiencing increasing tourism and development pressures. As a result, they are the site of several **key tensions**: between environmental protection, development pressures, climate change impacts, and access to water for both tourists and residents.

The tensions at play across the Shore Lands have contributed to significant challenges within the PEC community. Residents are often having to compete with tourists for the few areas of public access to beaches and the waterfront for recreation—only 11% of the shoreline is publicly accessible.¹⁰ The private development on the water's edge has also affected the function of natural features along the coast, such as vegetation, wetlands and natural buffers. Those living and working on the shorelines are directly facing the effects of climate change, including record-high water levels and increasingly severe drought. This impacts the County's flora and fauna, contributing to environmental degradation and economic hardships. Notably, the 2016 drought event prompted \$17.5 million in crop insurance claims throughout the County.¹¹

Population growth in the County is on the rise, particularly among seasonal residents. To accommodate this growth, alternative forms of land use have emerged. For example, the conversion of private residences into short-term accommodations (STAs) is becoming increasingly common due to increasing tourism demand.¹² As of November 29, 2021, there were 514 active STAs and 303 pending applications.¹³ This is contributing to changing tourist accommodations, and an unaffordable housing

market that is quickly becoming out of reach for both longtime residents and a large portion of the county's workforce, particularly those working in the tourism and service industry.¹⁴ Ultimately, the integrity of the environment and overall quality of life is at stake in the County if these **key tensions** aren't addressed or balanced.

2.2 Coastal Resilience

Our team is proposing a plan grounded in the principle of resilience to navigate the **key tensions** in the Shore Lands. Resilience refers to the ability of a system to absorb and respond to change; to recover from disturbance and "bounce back" within safe operating conditions.¹⁵ Planning criteria and tools that incorporate resilience will therefore promote sustainable land use patterns. These allow for communities, economies, and ecosystems to respond to extreme events while mitigating the risk to human, ecological, and economic health.

¹⁴ Brockbank, "Tourism in Ontario's Prince Edward County Is Booming. If Only Staff Could Afford to Live There."

¹⁵ Holling, "Resilience and Stability of Ecological Systems"; Lister, "Resilience Beyond Rhetoric in Urban Landscape Planning and Design," 303–25.



Figure 2: Our recommendations are grounded in the three pillars of social, economic and environmental resilience.

¹⁰ Prince Edward County, "Official Plan Review: Issues Paper 11 - Shore Land."

¹¹ Quinte Conservation, "Quinte Region Drought Plan: Final Report."

¹² Prince Edward County, "Tourism Management Plan."

¹³ Prince Edward County, "Layer: ActiveSTA."

Framing the analysis around the three pillars of **social, economic and environmental** resilience grounds our work in the management of human activity, rather than attempting to control the natural environment.

Land use planning can be an effective tool to encourage resilience and climate change adaptation in coastal great lake communities.¹⁶ Climate change is expected to bring continued changes in the region's hydrology, including more intense drought and flooding, as well as changes in water levels in the Great Lakes.¹⁷ Coastal communities on the Great Lakes are therefore very vulnerable to the impacts of climate change. With over 500 km of shoreline,

¹⁶ Kim, Marcouiller, and Woosnam, "Coordinated Planning Effort as Multilevel Climate Governance."

¹⁷ Kahl and Stirratt, "What Could Changing Great Lakes Water Levels Mean for Our Coastal Communities? A Case for Climate-Adapted Planning Approaches"; Wuebbles et al., "An Assessment of the Impacts of Climate Change on the Great Lakes."

resilience to the coming climatic shifts is of vital importance to Prince Edward County. This also means that there are many opportunities for intervention to increase resilience. Due to the limited public land available along the water's edge, interventions must largely take place on private property. The Shore Lands land use designation offers an opportunity to promote coastal resilience within key areas that can have far reaching impacts for the County as a whole.

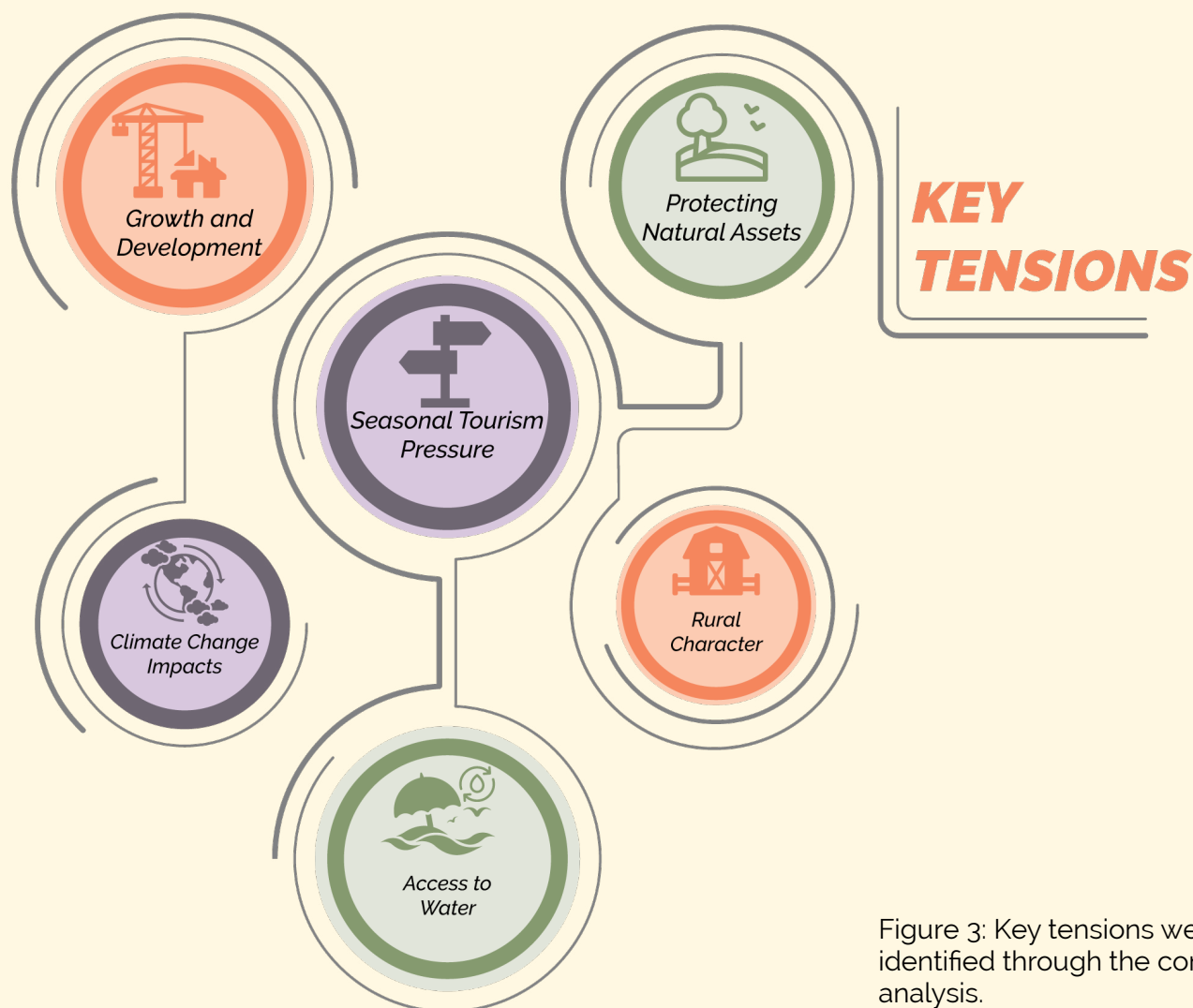


Figure 3: Key tensions were identified through the context analysis.

3.0 ANALYSIS & RECOMMENDATIONS

The Shore Lands designation is a valuable tool due to its ability to guide development along the shorelines of Prince Edward County in a manner that promotes coastal resilience. Therefore, we recommend retaining the Shore Lands designation and its associated policies. However, minor changes should be made to the implementation and enforcement of the Shore Lands policy objectives to encourage sustainable development, give the County context-specific flexibility for development on the shoreline, and prioritize public access to water. This requires a two pronged approach.

First, we have to identify which lands should be included in the Shore Lands designation. We have established this through a set of **inclusion criteria** that can be used to evaluate lands and determine whether there is a strong planning rationale for including said lands in the Shore Lands designation. The **inclusion criteria** were informed by key findings from our **context and spatial analysis**. Put simply, we concluded that the Shore Lands designation should be used for areas that can (and should) support the development of a wide variety of tourism and residential uses.

Second, we have to determine how we can ensure that the form of development is context specific, resilient, and protects the natural environment. Therefore the County must mandate the use of enforceable **tools** to ensure that any development proposed within the Shore Lands designation is sustainable, resilient, and high-caliber in design. The **tools** were informed by both our **context analysis** and a **comparative case study analysis** across five jurisdictions across the United States and Canada with similar characteristics and **key tensions** to PEC.

3.1 Inclusion Criteria

3.1.1 Overview

The first step of our approach asks: *which lands have a strong planning rationale for continued*

inclusion within the Shore Lands designation? A set of seven **inclusion criteria** were developed to identify whether a current Shore Land designated area has a strong or weak planning rationale for continued inclusion within the Shore Lands designation.

Conceptually, we envision that specific lands along the shore can be assessed based on the degree to which they meet each of the planning goals of the designation, as outlined in the *Official Plan*. This framework does not require all lands to meet all **inclusion criteria** to allow for context-aware flexibility. Rather, it lays out a set of considerations that can contribute to a rationale for inclusion or exclusion of the designation. The **inclusion criteria** have been designed to be applied through a detailed spatial analysis to allow PEC to evaluate areas or parcels to determine whether there is a strong rationale to designate the lands as Shore Lands, or if they should be considered as part of another existing designation. Details for quantifying and ranking between each criterion should be directed by relevant data and plans, both complete and in the works.

3.1.2 Process

Context Analysis

The **context analysis** informed the development of both the **inclusion criteria**, and the tools proposed in Section 3.2. The **context analysis** began to frame the issues within the county through the lens of coastal resilience, while grounding our work within the policy framework in place in the County. Our analysis focused on three research themes which were understood through a scan of media, reports, literature, municipal and provincial policies and plans. The research themes included:

1. Agriculture, economic development, and tourism
2. Environment and resilience
3. Housing, development, and demographics

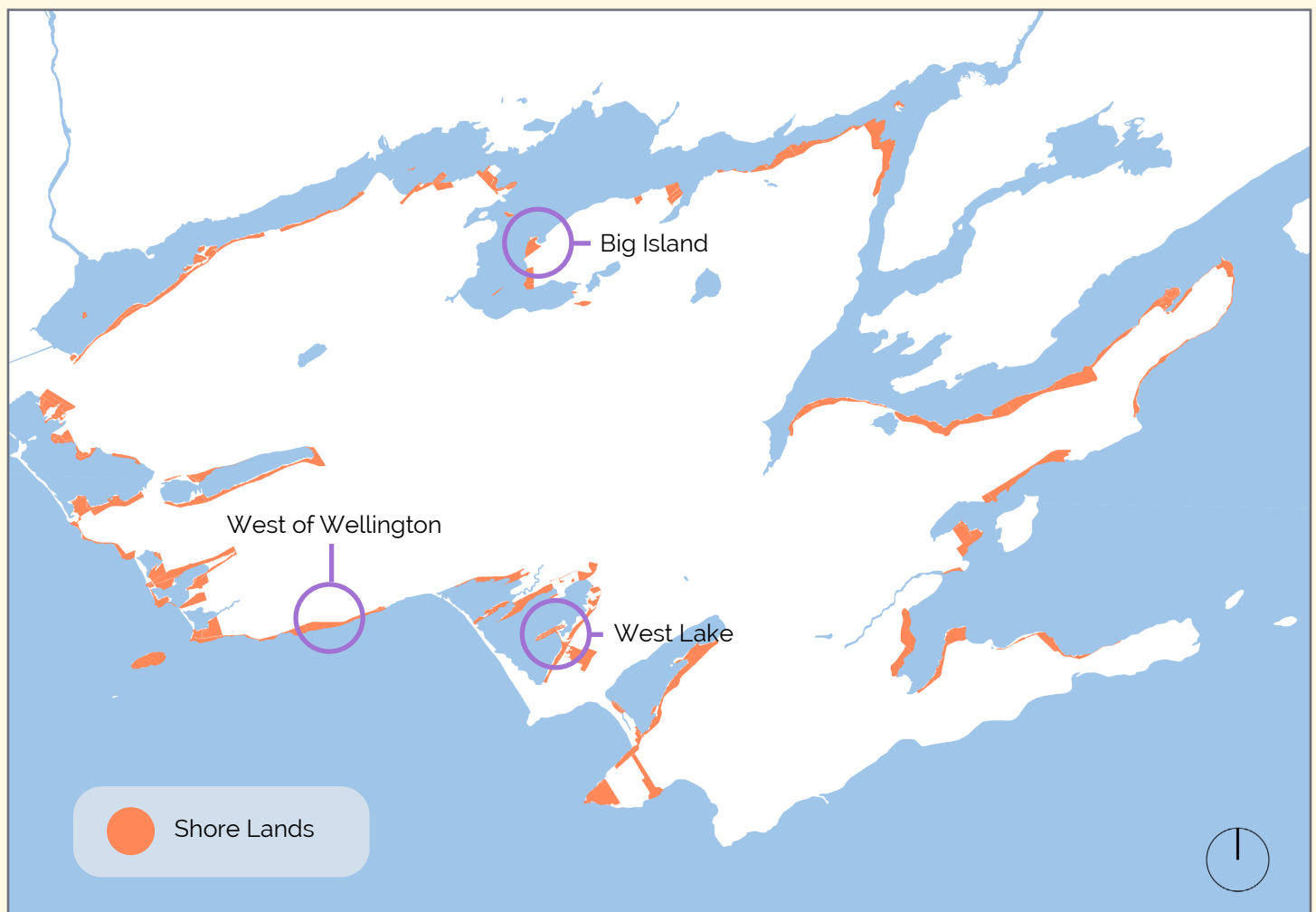
The context analysis concluded that the Shore Lands are contested lands within the County, with several **key tensions** acting within and across the lands. We established that Shore Lands are meant to be lands suitable for the development of a wide variety of uses along the rural waterfront, including both residential and commercial uses. The full synopsis of the **context analysis** can be found in Appendix 4.

Spatial Analysis

Combining the information gathered through the **context analysis** (Appendix 4) with a **spatial analysis**, **Hotspot Regions** were identified.

These are areas where many of the **key tensions** overlap and are illustrative of the contested nature of the Shore Lands. Examining the **Hotspot Regions** informed the **inclusion criteria** for the Shore Lands designation. While **Hotspot Regions** occur throughout Prince Edward County, three areas have been highlighted as they demonstrate how the **key tensions** overlap differently across the County:

1. West Lake
2. "Big Island"
3. West of Wellington



Map 4: Hotspot Regions that are illustrative of the contested nature of the Shore Lands.

WEST LAKE



Map 5: Hotspot Region 1 - West Lake

Development Pressures

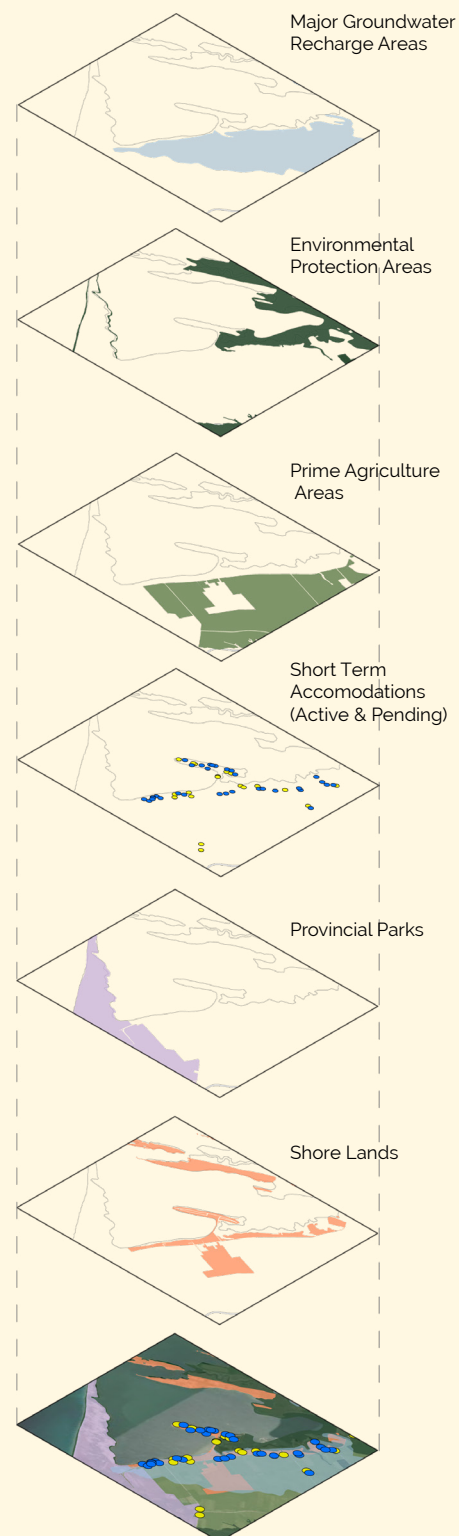
Directly adjacent to Sandbanks Provincial Park
Concentration of Short Term Accommodations

Environmental Protection

Directly adjacent to Prime Agricultural lands and
Environmental Protection areas

Water Access

Sits on top of a major groundwater recharge area



BIG ISLAND



Map 6: Hot Spot Region 2 - an area we are referring to as "Big Island"

Environmental Protection

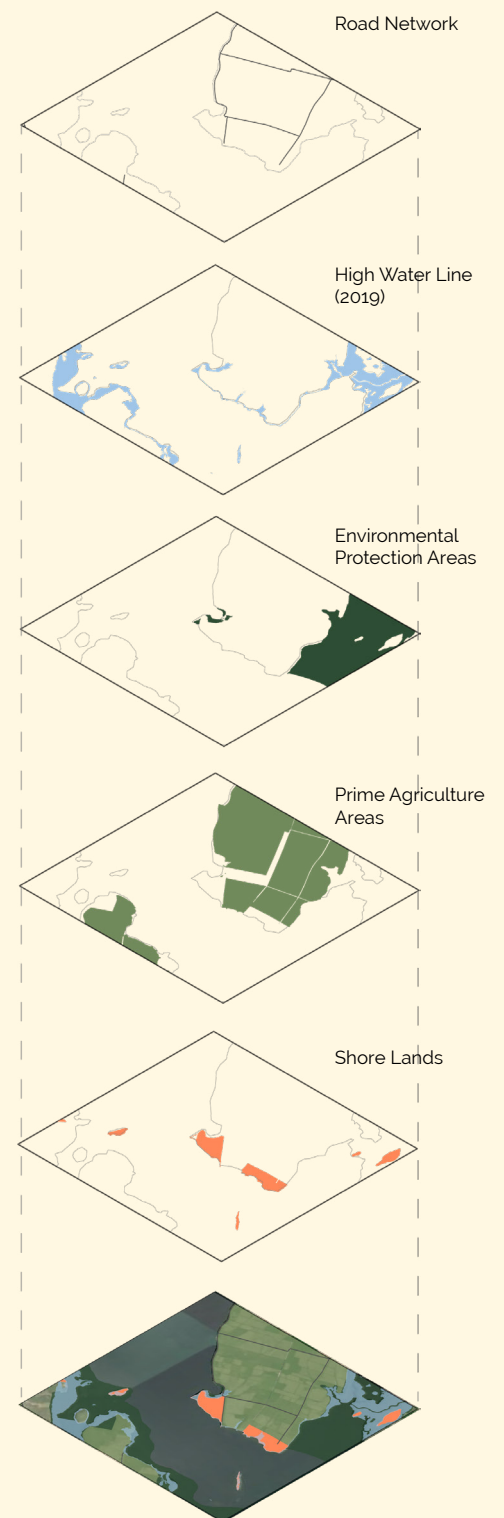
Directly adjacent to Prime Agricultural lands and Environmental Protection areas

Climate Change Impacts

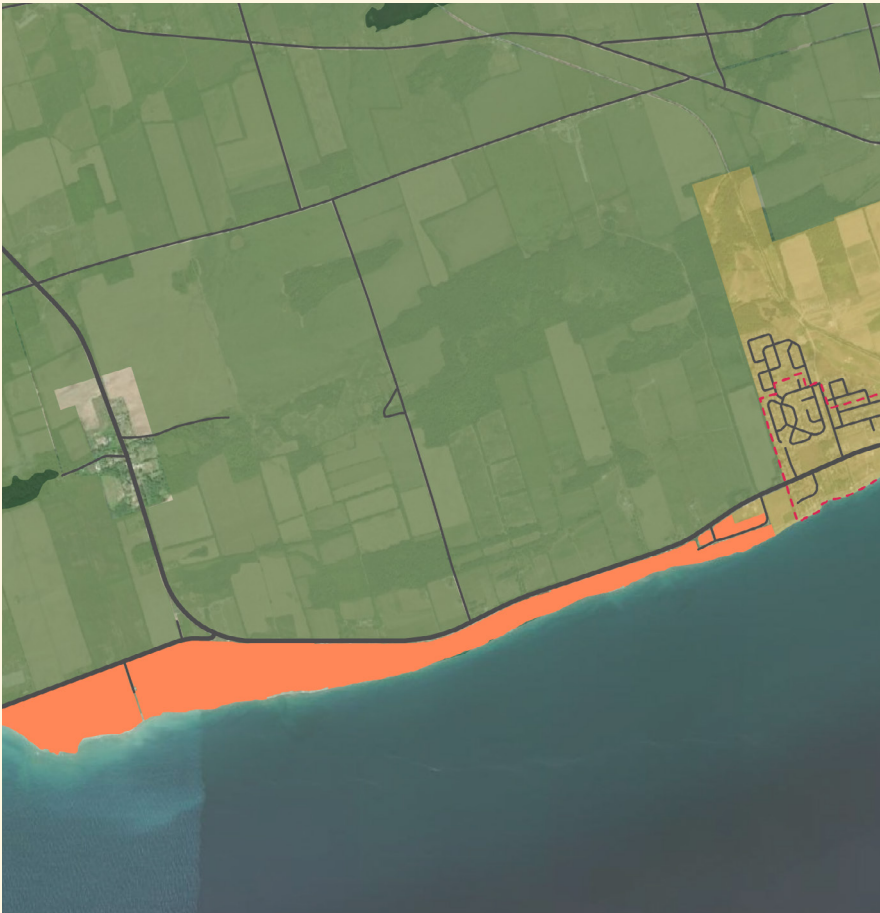
2019 High Water Mark indicates that the area may be at risk of flooding

Water Access

Road network demonstrates the areas that are accessible by existing municipal infrastructure



WEST OF WELLINGTON



Map 7: Hotspot Region 3 - West of Wellington

Development Pressure

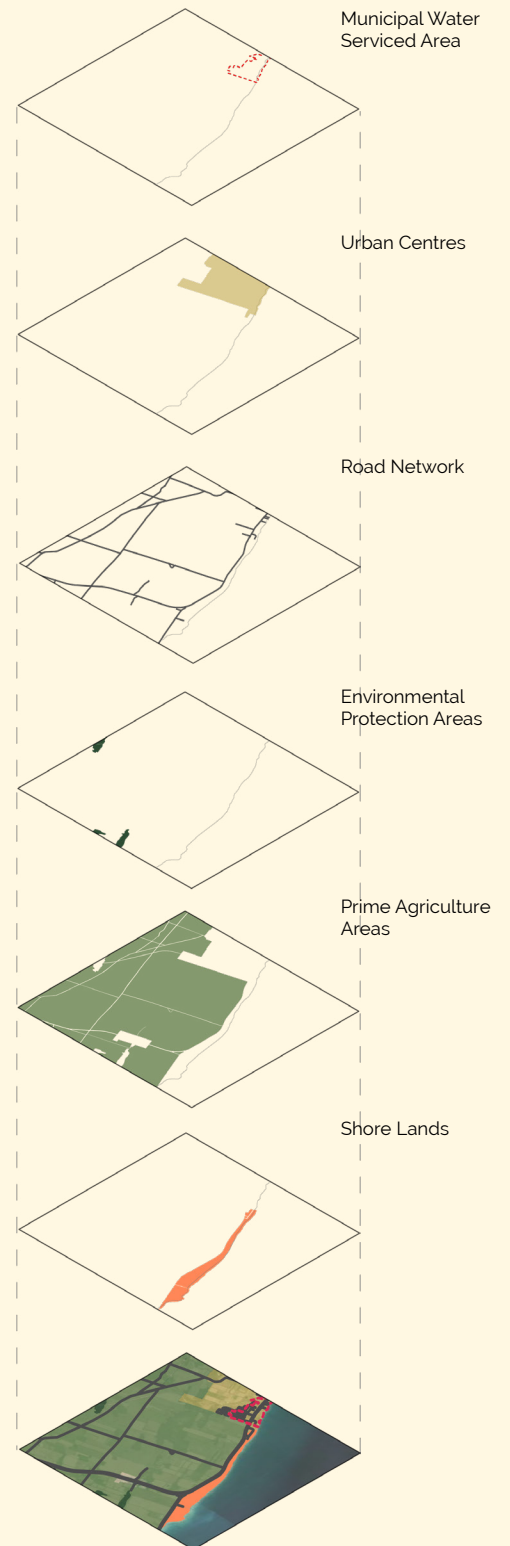
Adjacent to Wellington, a designated Urban Centre where growth is being directed

Water Access

Desirable area for water access due to proximity to urban centres and calm lake conditions

Environmental Protection

Directly adjacent to Prime Agricultural lands



3.1.3 Proposed Inclusion Criteria

The context and **spatial analysis** have informed our proposed **inclusion criteria** for the Shore Lands designation as detailed below. Appendix 1 provides additional information on our seven proposed **inclusion criteria**, the related **key tensions**, and information required to further inform the specifications of each.

This **inclusion criteria** can be used to identify whether a current Shore Land designated area has a strong or weak planning rationale for continued inclusion within the Shore Lands designation.

Criterion 1 : Level of service by Municipal Infrastructure

Shore Lands are areas where tourism uses and accessible mobility is desirable, and should be located to rely on existing public roads. Additionally, when possible along the County's tourism network for appropriate tourism supportive uses. This criterion can be further informed by the County's recently underway *Transportation Master Plan*, and completed *Destination Development Strategy* and *Tourism Management Plan*.

Criterion 2: Level of overlap with Natural Assets

Large-scale development on the Shore Lands should be directed away from sensitive ecosystems to protect their function. This criterion can be informed by Provincially and Federally significant natural areas (e.g. Provincially Significant Wetlands, Areas of Natural and Scientific Interest, etc.), the Natural Core and Linkage areas identified in PEC's Official Plan, and the Quinte Conservation *Shoreline Management Plan* which is currently under development. The natural asset mapping portion of the *Shoreline Management Plan* will be of particular importance for this criterion.

Criterion 3: Risk from Natural Hazards

Lands that are very susceptible to erosion and flooding along the shore line are likely not suitable for significant development. Therefore, large-scale development should be located away from significant natural hazards. Some smaller scale development may be appropriate nearer to natural hazards, provided that development is sensitive to hazards and mitigates risk. This criterion can be further informed by the underway Quinte Conservation *Shoreline Management Plan*. The natural hazard mapping portion of this plan will be of particular importance for this criterion.

Criterion 4: Proximity to Agricultural Uses

The scale and type of development that is permitted in the Shore Lands designation has the potential to interfere with good agricultural function. The Shore Lands designation is a part of the rural system, and therefore has a significant interface with agricultural lands. Shore Lands should not be areas that are prime agricultural lands, and more intensive development should be located away from prime agricultural lands. This criterion can be informed by Provincial agricultural and soil survey data, and land use patterns outlined in the PEC *Official Plan*.

Criterion 5: Potential for Water Access

Commercial and residential development along the waterfront should be located in areas that have the potential for high quality and safe recreational access to the water. Additionally, policies in the PEC *Official Plan* allow for the County to require public water access through development agreements. This is unique to the Shore Lands designation, and therefore can be used to acquire additional public access points where recreational water access is desirable. This criterion can be further informed by the recently announced *Parks and Recreation Master Plan*.

Criterion 6: Degree of Aquifer Vulnerability

The increase of impermeable area from development within the Shore Lands can lead to poorer groundwater recharge, and increased runoff to lakes. This not only impacts the individual lands, but also the integrity of the County's water supply as a whole. Therefore, large scale development should be directed away from highly vulnerable aquifers. Additionally, development should be directed towards areas that have access to adequate groundwater to support the development. This criterion can be informed by *Schedule D: Resource Areas* within the County's *Official Plan*, and Quinte Conservation's *Drought Management Plan*. More detailed groundwater information would be useful to determine where groundwater is especially constrained.

Criterion 7: Proximity to Tourism Corridors

Shore Lands are lands that are appropriate for tourism related uses, and should be located in areas that tourism activity is desirable along the County's tourism network. This criterion can be informed by details from the County's *Destination Development Strategy and Tourism Management Plan*, and coordinated with *Official Plan* policies regarding Tourism Corridors.



Bishop-Kovac (2021)

3.1.4 Interim Application

In the interim, the evaluation matrix will be based on existing data collected by Prince Edward County, Quinte Conservation, and the Province of Ontario. As Master Plans, Management Plans, and Strategies for the municipality are finalized and developed, more information will be available to inform decisions. Based on existing data, **spatial analysis** will be used to form the primary **inclusion criteria** for Shore Lands. The inclusion criteria can also help inform context-specific design on Shore Lands as outlined in Section 3.2.5. Data sources used have been detailed in Section 3.1.2.

3.1.5 Prioritization

The **inclusion criteria** developed are not all equal. Certain **inclusion criteria** are essential in deciding whether the Shore Lands designation is appropriate for areas. Other **inclusion criteria** may contribute to the decision in part, but are secondary in importance to the core criteria. The prioritization of these **inclusion criteria** is largely a value-driven process, and should be considered in consultation with the public and major stakeholders to ensure the needs of the community are met.

Figure 4 details the prioritization of the **inclusion criteria** into Core Criteria, and Secondary Criteria. The Core Criteria would be weighted more significantly than the secondary criteria, and would hold more significance in the decision making process. Secondary criteria are generally criteria that can be managed using context-specific mitigation strategies and development standards. These mitigation measures and development standards can be managed using the **tools** discussed in Section 3.2.

3.2 Tools

3.2.1 Overview

The second step of our approach asks: *How can we encourage sustainable, resilient, and quality development within the Shore Lands?* Using the **context analysis** as a starting point, we undertook a **comparative case study analysis**. Through case studies, we identified two **tools** that can help to guide development within the Shore Lands. The **tools** focus on two main principles for process improvement: site context and enforceability.



Figure 4: Conceptual diagram of the prioritization of the Inclusion Criteria

3.2.2 Process

Comparative Case Study Analysis

Based on our methods outlined in Section 1.3, six case studies were chosen and are outlined below. Further information on each case study can be found in Appendix 5.



Tofino, BC Development Permit Areas

Development Permit Areas provide detailed and context-specific guidance on several different themes, with design guidelines incorporated directly within the Zoning By-law.

Tofino Harbor in Tofino, BC. (n.d.).



Watkins Glen, NY Lakefront Development Zoning

All development along the waterfront is included within the Lakefront Development zone, ensuring development is sensitive to the natural environment.

Village Marina in Watkins Glen, NY. (n.d.).



Lincoln County, OR Coastal Shorelands Overlay Zoning

Used in conjunction with underlying zones, the Coastal Shorelands Overlay Zoning is used as a tool to meet the state-mandated Beach Bill, establishing specific pre-development standards with associated requirements.

Peak Visitor (n. d.)



Door County, WI Shorelands Ordinance

Under the Shorelands Ordinance, new developments must include specific mitigation measures to offset impacts to the shoreline, which are enforceable through the Zoning By-law.

Lewis, C. (n.d.)



Collingwood, ON Waterfront Master Plan

The Waterfront Master Plan specifies design guidelines for development along the waterfront.

West, D. (n.d.).



Lake of Bays, ON Community Planning Permit System (CPPS)

Currently under consideration, the updated CPPS would have several permit areas wherein permitted and discretionary uses are defined and regulated.

Lake of Bays, Muskoka, ON. (2018).

3.2.3 Proposed Tools

From our **case study analysis** we analyzed two potential **tools** – zoning overlays and Community Planning Permit Systems – to improve the enforceability of the Shore Lands policy framework.

Community Planning Permit System

A Community Planning Permit System (CPPS) By-law is an alternative to a Zoning By-law, enabled through the *Planning Act* in Ontario.¹⁸ CPPS streamlines the planning process by combining the procedures for minor variance, site plan control and rezoning into a single permit approval.¹⁹ A CPPS provides the County with flexibility, allowing community planners to regulate urban design goals and sustainable re-development of the shoreline. In addition, this system would provide staff with options for further study and development requirements, which can be identified during the pre-consultation process.²⁰ An example could include requirements for a needs assessment or compatibility plan based on tourism demands or adjacent agricultural uses. A CPPS also has a different definition of development than a Zoning By-law, requiring permits for additional site alteration activity.²¹ CPPS By-laws require planning applications for site alterations (grading and filling) and the removal of vegetation, which are very important to shoreline protection.

A CPPS would also allow Prince Edward County to implement **discretionary uses** within the Shore Lands which often require further information to be provided in order to determine the potential impact of the use and its appropriateness in a given area.²² This has been shown to be effective in the Township of Lake of Bays, which allows certain uses on its shoreline, provided that conditions are met.²³ These factors would all help the County to achieve the goal of building complete, resilient communities outlined in the *Official Plan*.

The framework for the creation of a Community Planning Permit System has already been

developed in the implementation policies of the new *Official Plan* (Section 5.1.11 *Community Planning Permit System*).²⁴

Zoning Overlay

A **zoning overlay** would allow the County to maintain the existing zoning categories and apply additional requirements for the built form on the waterfront, which are identified through an overlay in the Zoning By-law.²⁵ This tool can be implemented as an overlay that contains different form and performance requirements based on the proposed type of development.²⁶

The **zoning overlay** can be integrated with the County's existing design guidelines, while strengthening the enforceability to raise the bar for sustainable development.²⁷ As mentioned, strengthened **design requirements** can be specific to the proposed scale, use or form of development. For example, the County can require different form- or performance-based standards from large scale resort developments than from smaller residential development.

The **zoning overlay** can also require additional studies and reports to be completed to address identified challenges within Shore Lands, such as ensuring protection of natural assets, public access to the waterfront and provision of adequate workforce housing within larger tourism developments.

The County currently has overlay designations and symbols within *Section 4.5 of the Official Plan*, which intend to be used as overarching policies providing additional guidance for development throughout the countryside and in some settlement areas.²⁸ The *Official Plan* outlines that this is to allow for sustainable, attractive and healthy development and the triggering of further detailed analysis within the development application and approval process.

¹⁸ Government of Ontario, *Planning Act*.

¹⁹ Ontario Ministry of Municipal Affairs and Housing, "Community Planning Permit System."

²⁰ *Ibid.*

²¹ *Ibid.*

²² *Ibid.*

²³ Watersheds Canada, "Planning Tools for Shoreline Protection" Webinar with Melissa Markham.

²⁴ County of Prince Edward, "Official Plan."

²⁵ Centre for Land Use Education, "Planning Implementation Tools: Overlay Zoning."

²⁶ Planning for Hazards: Land Use Solutions for Colorado, "Overlay Zoning."

²⁷ For example, see City of Edmonton, "Mature Neighbourhood Overlay."

²⁸ County of Prince Edward, "Official Plan."

3.2.4 Recommended Tool:

Overlay Zoning

Both overlay zoning and Community Planning Permit Systems are useful tools due to their ability to establish enforceable form and performance based design requirements. These requirements can enable the County to further protect specific resources and shape development to particular standards within the Shore Lands. While both tools could be effective, we recommend that PEC consider using a zoning overlay in the Shore Lands. This tool was determined to be the most feasible for implementation in consultation with municipal staff, due to the Planning Division's capacity and the political environment. This recommendation was informed both by our research and the feedback we received from the County.

Using overlay zoning would allow the County to implement specific requirements within the Shore Lands without needing to alter the existing underlying zoning. This tool would be relatively simple to integrate into the County's current planning framework and can be administered in the same manner as existing zoning. Overlay zoning also shares some similarities with the Overlay Designations and Symbols described in the County's *Official Plan*, Section 4.5. Given the above, implementation of overlay zoning in the Shore Lands would likely require minimal capacity-building for the County's Planning Division, as well as minimal operating costs, compared to implementing a CPPS. Some capacity-building may be required in developing the standards and mapping for the overlay zone.²⁹

One of the key challenges associated with the implementation of overlay zoning is that it adds another set of requirements/approvals to the development process.³⁰ Considering this, it is important that the requirements in the overlay zones offer clear guidance, and that the rationale behind these requirements also be clear and consistent.³¹

²⁹ Planning for Hazards: Land Use Solutions for Colorado, "Overlay Zoning."

³⁰ Ibid.

³¹ Centre for Land Use Education, "Planning Implementation Tools: Overlay Zoning."

3.2.5 Application Overlay Streams

To address the site specific nature of proposed developments on Shore Land designated areas, we propose the introduction of three overlay zoning streams: Residential, Low-impact commercial (tourism) and High-impact commercial (tourism). This is to preemptively address the varying scale and level of impact that different natured developments will have on the Shore Lands and adjacent areas. Looking to ensure the highest form of resilient, sustainable and robust development on the shoreline. Table 1 outlines the three proposed Overlay Zones and corresponding development use and scale as adapted from the County's *Official Plan* definitions of Residential Intensification and Major Development.³²

³² County of Prince Edward, "Official Plan."



Figure 5 - A Zoning Overlay would add additional zoning regulations on top of existing zoning requirements.

Overlay Zoning Stream	Use/Scale
Residential	<ul style="list-style-type: none"> • Redevelopment of brownfield sites • Development of vacant land or underutilized lots within previously developed areas • Infill development • Conversion or expansion of existing industrial, commercial and institutional buildings for residential use • Conversion or expansion of existing residential buildings to create new residential units or accommodation
Low- Impact Commercial (Tourism)	<ul style="list-style-type: none"> • Proposed improvements less than 500 square meters in impervious area • Or has an environmental footprint* of less than 0.4 hectares (1 acre) requiring any of: <ul style="list-style-type: none"> a) An Official Plan amendment, b) A zoning by-law amendment c) A plan of subdivision/condominium; or d) A site plan control application(s)
High- Impact Commercial (Tourism)	<ul style="list-style-type: none"> • Proposed improvements greater than 500 square meters in impervious area • Or has an environmental footprint* of greater than 0.4 hectares (1 acre) requiring any of: <ul style="list-style-type: none"> a) An Official Plan amendment, b) A zoning by-law amendment c) A plan of subdivision/condominium; or d) A site plan control application(s)

Table 1. Three proposed Overlay Zones and corresponding development use and scale, *as adapted from the County's Official Plan definitions of Residential Intensification and Major Development.*

*total footprint including parking lots, driveways, building and structures, underground infrastructure, laneways and sidewalks, loading areas, septic systems, etc.

Context Specific Design Requirements

The *Prince Edward County 2021 Official Plan* currently outlines design policies for Shore Lands. These are meant to guide development in the Shore Lands to ensure that new developments are meeting the objectives laid out in the official plan. The existing policies emphasize the visual impact of development, sustainable growth, protection of ecological function, and prioritizing public access to water. The language within the current design policies allows a lot of room for interpretation, using terms such as “shall have regard for [...]”.³³ A set of updated design *requirements* embedded directly into a zoning overlay, with clearer and more enforceable language, would significantly elevate development standards within Shore Lands.

Because of the strong development climate along PEC’s shore, the Shore Lands could be a good arena to pilot municipal Green Development Standards.

Prince Edward County’s context specific design requirements should align with the different streams in the zoning overlay to ensure requirements are responsive to the scale and use of the proposed development. The design requirements can focus on several different themes, including building form, siting, exterior design and finish of buildings, landscaping and streetscape, signage, drainage, shoreline protection, and natural environment. Considerations on policy specific to parkland dedication, natural heritage features and linkages, adequate housing, tourism uses, short-term accommodation, and naturalized shorelines should also be included in the revised design policies. The objective is not to stifle development with excessively prescriptive design standards; rather, the objective is to leverage the desirability of the County’s waterfront to maintain a higher development standard that promotes environmental, social, and economic resilience.

Other than the existing design policies outlined in the *Official Plan*, additional requirements

should be grounded in identified risks, challenges, and stated objectives of the Shore Lands. For example, the County could develop specific requirements that address shoreline protection, the risk of erosion and aquifer vulnerability. The following sample design requirements were informed by our **case study analysis**. These samples are meant to illustrate the level of specificity that design requirements embedded in the zoning overlay could have. They do not represent a comprehensive list of design requirements that the County should incorporate. A comprehensive list of context-specific design requirements is an area of further research and development that should be undertaken.

Shoreline Protection, Risk of Erosion & Aquifer Vulnerability³⁴

1. A Stormwater Management Plan may be required, complete with recommendations for implementation that address water quality, water quantity, storm water discharge rate and erosion control, to minimize impacts on the natural shoreline ecology and beach processes.
2. A Vegetation and Landscape Plan may be required, outlining access points, and what vegetation species are to be used in replanting, restoration and enhancement. All vegetation must be native to the local eco-climatic region, and be selected for erosion control and preservation of the shoreline ecology.
3. Where shore protection measures are necessary, development proponents should make use of soft structural methods and beach nourishment designs which add appropriately sized material to the upper beach, creating a natural beach slope and beach protection;
4. “Hard” shore protection measures such as gravel placement, rock (rip rap) revetments, gabions, concrete groins, retaining walls or bulkheads, and seawalls are generally not acceptable;

³³ County of Prince Edward, “Official Plan: Appendix C - Design Policies.”

³⁴ The following guidelines are adapted from: District of Tofino, “Zoning Bylaw No. 770, 1997”; Lincoln County, “Lincoln County Code. Land Use Planning. Chapter 1,” 98–99.

Resources for Sustainable Design Standards and Requirements

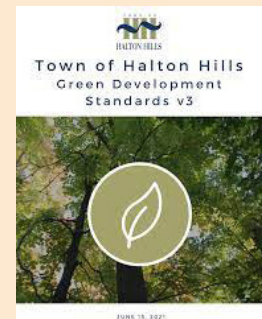
Waterfront Toronto Minimum Green Building Requirements (MGBR)

Waterfront Toronto's Green Building Requirements are applied to all developments that have agreement with the organization. The requirements include resilience planning requirements, as well as many green building standards that development must meet.



Halton Hills Green Development Standards

A green standard checklist to be applied to three streams of development, low rise residential, low rise non-residential, and mid/high rise residential development.



Municipal Green Development Standards Toolkit

Published by the Federation of Canadian Municipalities, this toolkit provides a comprehensive guide for municipalities to develop their own Green Development Standards.



Additional resources are included in Appendix 3.

4.0 CONCLUSION

Prince Edward County passed its new *Official Plan* in July 2021, meaning they have two years before amendments can be made, and three years to update zoning by-laws to conform to the *Official Plan*. This provides the council with a window of opportunity to review the Shore Lands designation and determine if it is needed and/or which lands are best suited to remain within it.

We recommend that Prince Edward County further develop and refine the ***inclusion criteria*** for the Shore Lands as outlined in this report. Once that process is complete, the ***inclusion criteria*** should be used to evaluate current Shore Lands to determine whether there is a strong planning rationale for continuing to include them in the Shore Lands designation. This should be done with the understanding that the Shore Lands designation should be used for areas that can (and should) support the development of a wide variety of tourism and residential uses.

Second, we recommend that Prince Edward County implements a ***zoning overlay*** across the areas designated as Shore Lands to ensure that the form of development is context specific, resilient, and protects the natural environment. The objective of the zoning overlay is to provide a set of enforceable design requirements that will ensure that any development proposed within the Shore Lands designation is sustainable, resilient, and high quality in design. A comprehensive list of design requirements to be incorporated into the zoning overlay would need to be developed by the County.



Bishop-Kovac (2021)

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Map 2

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Map 3

Government of Canada. (2019, July 24). Lakes, Rivers and Glaciers in Canada—CanVec Series—Hydrographic Features—Prepackaged FGDB files—Canvec_250K_ON_Hydro_fgdb. http://ftp.maps.canada.ca/pub/nrcan_rncan/vector/canvec/fgdb/Hydro/

Prince Edward County. (2021). Shore Land—Schedule A: Land Use Designations—Official Plan of Prince Edward County 2021.

Map 4

Government of Canada. (2019, July 24). Lakes, Rivers and Glaciers in Canada—CanVec Series—Hydrographic Features—Prepackaged FGDB files—Canvec_250K_ON_Hydro_fgdb. http://ftp.maps.canada.ca/pub/nrcan_rncan/vector/canvec/fgdb/Hydro/

Prince Edward County. (2021). Shore Land—Schedule A: Land Use Designations—Official Plan of Prince Edward County 2021.

Map 5

Land Information Ontario & Ministry of Natural Resources. (2018). South Central Ontario Orthophotography Project (SCOOP) 2018.

Prince Edward County. (2021a). Agricultural Area—Schedule A: Land Use Designations—Official Plan of Prince Edward County 2021.

Prince Edward County. (2021b). Environmental Protection Area—Schedule A: Land Use Designations—Official Plan of Prince Edward County 2021.

Prince Edward County. (2021c). Layer: ActiveSTA. https://services1.arcgis.com/4HnHVMKSNypElkS/arcgis/rest/services/Active_STAs_Public/FeatureServer/0

Prince Edward County. (2021d). Provincial Park—Schedule A: Land Use Designations—Official Plan of Prince Edward County 2021.

Prince Edward County. (2021e). Shore Land—Schedule A: Land Use Designations—Official Plan of Prince Edward County 2021.

Prince Edward County. (2021f). Significant Groundwater Recharge Areas—Schedule D: Resource Areas—Official Plan of Prince Edward County 2021.

Map 6

Land Information Ontario & Ministry of Natural Resources. (2018). South Central Ontario Orthophotography Project (SCOOP) 2018.

Ontario Ministry of Natural Resources and Forestry. (2021). Ontario Road Network (ORN) Segment With Address. <https://geohub.lio.gov.on.ca/datasets/mnrf::ontario-road-network-orn-segment-with-address/>
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Prince Edward County. (2021b). Environmental Protection Area—Schedule A: Land Use Designations—Official Plan of Prince Edward County 2021.

Prince Edward County. (2021c). Shore Land—Schedule A: Land Use Designations—Official Plan of Prince Edward County 2021.

Map 7

Land Information Ontario & Ministry of Natural Resources. (2018). South Central Ontario Orthophotography Project (SCOOP) 2018.

Ontario Ministry of Natural Resources and Forestry. (2021). Ontario Road Network (ORN) Segment With Address. <https://geohub.lio.gov.on.ca/datasets/mnrf::ontario-road-network-orn-segment-with-address/>

Prince Edward County. (2021a). Agricultural Area—Schedule A: Land Use Designations—Official Plan of Prince Edward County 2021.

Prince Edward County. (2021b). Environmental Protection Area—Schedule A: Land Use Designations—Official Plan of Prince Edward County 2021.

Prince Edward County. (2021c). Shore Land—Schedule A: Land Use Designations—Official Plan of Prince Edward County 2021.

Prince Edward County. (2021d). Tourism Corridor (Municipal)—Schedule F-1: Recreation & Tourism—Official Plan of Prince Edward County 2021.

Prince Edward County. (2021e). Tourism Corridor (Provincial)—Schedule F-1: Recreation & Tourism—Official Plan of Prince Edward County 2021.

Prince Edward County. (2021f). Urban Centre: Land Use Designations—Official Plan of Prince Edward County 2021.

Prince Edward County. (2021g). Water Operational Areas.

Map 8

Government of Canada. (2019, July 24). Lakes, Rivers and Glaciers in Canada—CanVec Series—Hydrographic Features—Prepackaged FGDB files—Canvec_250K_ON_Hydro_fgdb. http://ftp.maps.canada.ca/pub/nrcan_rncan/vector/canvec/fgdb/Hydro/

Prince Edward County. (2021a). Agricultural Area—Schedule A: Land Use Designations—Official Plan of Prince Edward County 2021.

Prince Edward County. (2021b). Environmental Protection Area—Schedule A: Land Use Designations—Official Plan of Prince Edward County 2021.

Prince Edward County. (2021c). Shore Land—Schedule A: Land Use Designations—Official Plan of Prince Edward County 2021.

APPENDICES

Appendix 1: Inclusion Criteria

Evaluation Matrix	Spectrum Details (Weak to Strong)	Requires Information from	Corresponding Tension
Level of service by Municipal Infrastructure (i.e. roads)	Poorly Served ---- Well Served	PEC OP Schedule E - Transportation & Infrastructure (complete) Transportation Master Plan (in progress)	Tourism Environmental Protection Access to Water Economic
Level of overlap with Natural Assets	Within/Adjacent --- Very far	PEC OP Schedule B - Natural Features & Areas (complete) Provincially and federally significant natural areas (complete) Quinte Conservation Shoreline Management Plan - Natural assets (in progress)	Environmental Protection Tourism
Risk from Natural Hazards	Very High Risk --- Low Risk	PEC OP Schedule C - Constraint Areas (complete) Quinte Conservation Shoreline Management Plan - natural hazards (in progress)	Environmental Protection Access to Water Economic
Proximity to Agricultural Uses	Within/Adjacent --- Very far	PEC OP Schedule A - Land Use Designations (complete) Provincial agricultural and soil survey data (complete)	Environmental Protection Tourism Access to Water
Potential for Water Access	Inaccessible --- Very High Accessibility	Parks and Open Space Master Plan (not yet initiated)	Access to Water Tourism Economic Environmental Protection
Degree of Aquifer Vulnerability	Within/Adjacent --- Very Far	PEC OP Schedule D: Resource Areas (complete) Drought Management Plan (complete) PEC could consider more detailed groundwater vulnerability and resilience data	Environmental Protection Tourism
Proximity to Tourism Corridors	Very far from existing tourism corridors--- Along strategic tourism corridors	County's Destination Development Strategy Tourism Management Plan	Tourism Economic Environmental Protection

Appendix 2: Guiding questions used for comparative case study analysis

Questions	Guiding Questions
Introduction to Case Study Area: Definition of Local Problem	<ul style="list-style-type: none"> • How does it relate to defined Themes? <ul style="list-style-type: none"> • Character, Access to Water, Real Estate Development, Tourism • Are there policy objectives that mention resilience/sustainability? <ul style="list-style-type: none"> • Environmental, Economic and or Social specifications?
Planning Tools for Development in Shoreline	<ul style="list-style-type: none"> • How does the planning tool(s) work? • Is there Inclusion/exclusion criteria?
Potential Implications for Planning in Prince Edward County	<ul style="list-style-type: none"> • Could [case study's tool] be applied in PEC? <ul style="list-style-type: none"> • How? If not, why?

Appendix 3: Additional Resources for Sustainable Design Standards and Requirements

Shore Land Mitigation Measures Handbook (Wisconsin Shore Land Ordinance)

Includes a suite of mitigation measures that landowners may choose from when offsetting the impacts of their development using a points-based system.

Toronto Green Standard

Includes required and voluntary green development standards based on building typology (low-rise residential, high-rise residential, and commercial buildings). The voluntary portion of the program is incentive based through the reduction of DCs.

Burlington Sustainable Building and Development Guidelines

Green Development Guidelines to be implemented at all stages of the planning process. Includes both required and voluntary development standards.

Green Shores For Shoreline Development Credits And Ratings Guide

Developed in BC, the Green Shores program is a voluntary third-party certification system (similar to LEED) to promote resilient development along shorelines. The system includes a series of "credits" based on evidence based best management practices.

North Oakville Sustainable Development Checklist & User Guide

Applied to subdivision and site plan applications, the checklist outlines both required and voluntary green development standards.

Wetlands Canada Shoreline Habitat Creation Manual

Includes best management practices to increase important shoreline habitat, including planting guides and some site design considerations.

Credit Valley Conservation - Low Impact Development Design Manual + Guidelines

Design manual for low-impact development (LID) measures used to manage stormwater runoff, and increase groundwater recharge.

Sustainable King: Green Developments Standards - Handbook and Guidelines

King Township recently developed a series of metrics to evaluate the sustainability of new development. The guidelines will be applied to all new site plan applications within the Township.

Appendix 4: Context Analysis

A4.1 Real Estate Development

Overview

Prince Edward County has a hot real estate market, and is experiencing residential and tourist development pressure. A critical issue to consider is whether real estate development in the Shore Lands is meeting the County's current social, environmental, and economic needs and objectives.

The County is struggling with the provision of affordable and suitable housing. Housing prices nearly doubled in the decade between 2008 and 2018.¹ More recently, pandemic-induced increases in immigration from Toronto residents further accelerated these trends. The Prince Edward County real estate market was already heating up prior to COVID-19, but the shocks associated with the pandemic, such as an increase in migration from Toronto residents, further accelerated and amplified those trends. Depending on what month you look at, Prince Edward County has seen 30-80% year-over-year average selling price gains between 2020 and 2021,² with the average price of a home in March 2021 at \$821,000.³ Inventory of homes for sale are also at record lows, with only 41 listings in March 2021 compared to 249 in May 2020.⁴

Supply is also constrained in the rental market. The County's *Primary Market Rental Vacancy Rate* study, conducted in 2018, identified a vacancy rate of 0.81%.⁵ This is well below the 3% that housing experts and advocates consider to be healthy, a rental market that allows tenants to find suitable and affordable units.⁶ This shortage of rental housing, particularly affordable rental housing, not only impacts renter households across PEC who are having trouble finding suitable and affordable long-term housing, but business owners who are finding it challenging to retain staff. Anecdotal evidence suggests that business owners are having to find housing for their staff who would otherwise be priced out of the market. They have had to explore creative solutions: building a bunkie for staff housing on their property, co-signing a lease on a three-bedroom home for staff,⁷ or having staff stay in their personal coach house.⁸

Across the County, 86% of housing stock is comprised of single detached homes.⁹ The Prince Edward County Affordable Housing Corporation has identified the greatest supply needs as: 1) purpose-built long-term rental—particularly 1-bedroom units and units below market rent; 2) middle market housing suitable for downsizing seniors or those seeking access to the ownership market.¹⁰ This increasingly strong demand needs to be met with an increase in supply. The County is projecting over 3,200 housing starts in the next five years to catch up with real estate demand, which represents a 333% increase over the previous 6-year period.¹¹

1 The County Foundation, "Vital Signs Report 2018."

2 Gordon, "Red-Hot and Rural"; Hull, "Prince Edward County Real Estate."

3 Prince Edward County Affordable Housing Corporation, "Annual Report 2020."

4 Treat Hull + Associates, "Price Explosion."

5 Prince Edward County, "Primary Market Rental Vacancy Rate."

6 Cohrs, German, and Haines, "Getting to 8,000."

7 Gordon, "Red-Hot and Rural."

8 Brockbank, "Tourism in Ontario's Prince Edward County Is Booming. If Only Staff Could Afford to Live There."

9 Canadian Mortgage and Housing Corporation, "Housing Market Information Portal: Prince Edward County (CY)."

10 Prince Edward County Affordable Housing Corporation, "Prince Edward County Affordable Housing Corporation: Initial Business Plan - 2020 to 2022."

11 Prince Edward County, "Understanding Growth and Water / Wastewater Infrastructure."

Connection to Shore Lands

Real estate is particularly hot along the County's shoreline—prices for waterfront properties tend to be 125-150% higher than non-waterfront properties.¹ Planned larger developments are concentrated in the urban centres of Picton and Wellington; However, Shore Lands are also seeing development pressure. Three out of five active applications for plans of subdivision are located within Shore Lands. These would only produce 33 new single detached homes, but would span across over 163 acres of waterfront land.² Though subdivision development is no longer permitted within Shore Lands under the new *Official Plan*, the area will continue to see development pressure and the continued production of single family homes in the form of lot severances. Seasonal residents are projected to increase significantly in the coming years, and the County's *Official Plan* indicates tourism development within Shore Lands as a growth opportunity and notes that it could provide accommodations for seasonal residents and tourists, as well as tourist-related commercial activities.³ Shore Lands are directly located on the flood line of the County, making these lands particularly vulnerable to flooding and erosion as a result of climate change. Traditional development reduces the ability for ecosystems to absorb and respond to climate events because of changes in land cover, plant presence, and biodiversity.⁴

Opportunities & Challenges

With all of this in mind, our analysis needs to assess the capacity for Shore Lands to accommodate residential and tourist development pressure, while promoting environmental protection and climate resilience. Important opportunities and challenges to consider include:

- **Critical Housing Needs:** Considering current trends, residential development within Shore Lands is unlikely to contribute to the direct provision of affordable or even attainable housing. There is, however, an opportunity to provide much needed accessible staff housing, particularly for commercial businesses located within Shore Lands.
- **Different Types of Tourism Development:** We also need to manage traditional tourist development, such as resorts and hotels versus the increasing conversion of single family homes to short term accommodations.
- **Municipal Revenue Sources:** From a financial perspective, new developments provide the municipality with critical revenue sources with fees such as development charges, as well as an expanded property tax base.
- **Municipal Services and Infrastructure:** Development outside of serviced Settlement Areas also puts a strain on municipal infrastructure, and we need to consider whether the right mechanisms are in place to ensure growth pays for growth.
- **Climate-resilient development:** The 2021 *Official Plan* outlines strategies for adapting to climate change in new developments,⁵ but we need to consider if these are sufficient to address the risks to people and property when development is situated near shore lines.

1 McNutt, "Prince Edward County Real Estate."

2 Prince Edward County, "Prince Edward County Development Services Applications Dashboard."

3 County of Prince Edward, "Official Plan," 12.

4 Folke et al., "Regime Shifts, Resilience, and Biodiversity in Ecosystem Management."

5 County of Prince Edward, "Official Plan," 140.

A4.2 Access to Water

Overview

Prince Edward County's proximity to the water is one of the County's defining features. This positions the shoreline at the centre of development, tourist, and environmental pressures. A critical issue we will need to consider is whether the Shore Lands designation is helping the County meet its goals and objectives of promoting public access, economic growth, and simultaneously ensuring the conservation of the Shore Lands for current and future generations.

Only 11% of the shoreline is publicly accessible in Prince Edward County.⁶ Many of the parcels of land along the shoreline are privately-owned, which limits water access for residents that don't own lakefront property. Access to water is also a significant draw for tourists, compounding pressure on the areas available for public access. Provincial and federal parks, recreational water use, and lakefront views have put the County on the tourism map.⁷ The County has made a recent effort to disperse tourism pressure to other areas of the county. This can be seen in Prince Edward County's 2021 *Beyond the Beach* campaign, which encouraged visitors to explore alternatives to water-based tourism.⁸ This was a direct result of tourism pressure on the shorelines - and was exacerbated by increased domestic tourism due to the COVID-19 pandemic.

As private development and tourism increases along the shoreline, access to drinking water will also be strained. In the County, residents' source of drinking water is evenly divided between surface water and groundwater. Urban centres rely more heavily on surface water from the Bay of Quinte and Lake Ontario, while rural residents are the second highest consumers of groundwater to service their private water wells.⁹ This same groundwater is used for both industrial purposes and agricultural irrigation.¹⁰ With ecological support for biodiverse habitat and wetlands coming from both ground and surface water. As mentioned, properties outside of the urban municipally-serviced areas are mainly serviced by private water wells which are prone to drought in the summer months due to increased evapotranspiration and the County's geological makeup of predominantly cracked limestone - which requires consistent precipitation and surface water runoff due to its shallow depth (10-30m).¹¹ Drinking water infrastructure, particularly groundwater wells, will be strained by extreme weather and temperature increases associated with climate change impacts. These environmental changes will increase evapotranspiration as predicted over the next 30 years in the Quinte Region.¹² This is something we're already seeing, with the County issuing low water advisories for Prince Edward County for the past five consecutive years.¹³

6 Prince Edward County, "Official Plan Review: Issues Paper 11 - Shore Land."

7 Prince Edward County, "Tourism Management Plan."

8 Prince Edward County Official Tourism Site, "Beyond the Beach."

9 Prince Edward County, "Official Plan Review: Issues Paper 5 - Natural Environment."

10 Quinte Conservation, "Quinte Region Drought Plan: Final Report."

11 Ibid.

12 Ibid.

13 Quinte Conservation, "Low Water Messages."

Connection to Shore Lands

The *Official Plan* specifically states that "the provision of adequate public access to water in the Shore Land designation shall be ensured."¹ But in practice, developments can and do find ways around this. This is the case for two of the three current active applications for subdivision located in Shore Land designated areas, one of which states that the "site conditions are not suitable for public access."² Relying on nearby provincial parks, in this case Lake on the Mountain, to provide access to the lake and waterfront views. Though these active applications were likely submitted prior to the adoption of the new *Official Plan*, they are nonetheless illustrative of how developments can justify not adhering to design policies when there are no enforceable tools in place.

With the increasing development and encouraged access to Shore Lands via tourism, critical water resource areas within or adjacent to these designations, including Major Groundwater Recharge Areas and Source Water Protection Zones³ - run the risk of overuse, exacerbated by climate change implications such as increasing temperatures and storm frequency leading to increased drought, erosion and decreased water quality.⁴ One of PECs three key strategies for adapting to climate change is to increase the public's education on their role in minimizing the impacts of climate change.⁵ Direct exposure and experiences with the natural environment, particularly water due to its noted impacts on mental health, have the power to influence concern and protection of said environment.⁶

Opportunities and Challenges

Our analysis needs to assess the capacity of Shore Lands to allow for access to water while accommodating for sustainable development, tourism and environmental protection.

Important opportunities and challengers to consider include:

- **Public access to the water within development:** Policy, including the *Provincial Policy Statement*⁷ and the PEC *Official plan*⁸ supports public access to the water within private land and proposed development. Shore Lands currently have the policy to support this but we need to consider how access has not been prioritized in development.
- **Shore Lands as a Sustainable tourism draw:** We should consider how continued development without ensuring public access to the waterfront could impact tourism-based economic development.
- **Protection of ecologically sensitive water sources:** The *Official Plan* refers to the natural environment as their Natural Heritage System (NHS), created to allow for a more holistic systems-based management approach, protecting and enhancing features of both environmental and social value.⁹ We need to consider how Shore Lands can play a role in protecting these water related features.
- **Enhancing ecological awareness:** Despite the strains from access and projected over use, public access to water can enhance ecological awareness.¹⁰ We need to consider this enhanced awareness as having the potential to lead to a more environmentally aware population, who are more able to make balanced decisions on social, economic, and environmental welfare.

1 County of Prince Edward, "Official Plan," 101-2.

2 RFA Planning Consultant Inc., "Planning Justification Report: Cressy Bayside Estates Inc. Prince Edward County."

3 County of Prince Edward, "Official Plan: Schedule D - Resource Areas," 230.

4 O'Riordan, Gomes, and Schmidt, "The Difficulties of Designing Future Coastlines in the Face of Climate Change."

5 County of Prince Edward, "Official Plan," 140.

6 White et al., "Coastal Proximity, Health and Well-Being."

7 Government of Ontario, "Provincial Policy Statement, 2020."

8 County of Prince Edward, "Official Plan," 101-2.

9 Ibid., 5.

10 White et al., "Coastal Proximity, Health and Well-Being."

A4.3 Tourism

Overview

The economy of Prince Edward County is closely connected to tourism. While tourism in the County has adapted to changing needs over time, it has always maintained a community-based approach. In the past decade, Prince Edward County has experienced a rapid influx of visitors - a number that has only grown during the COVID-19 pandemic. The pressures on tourism in the region have stressed the need for creating tourism objectives that meet the needs of the community.

The tourism sector represents a significant part of the local economy. In 2019, it was estimated that Prince Edward County hosted 492,000 domestic tourists throughout the year, exceeding \$190 million in total spending based on past years.¹¹ Tourism is also the single largest source of employment in the county, representing 31% of all jobs.¹² Due to this importance, our evaluation of tourism uses within the Shore Lands must consider the economic and social impacts before making any changes to land use designations.

To ensure that tourism is meeting the needs of the community, Prince Edward County has developed the *Destination Development Strategy*, which outlines the following key principles:¹³ reducing over-tourism, building support for tourism, regenerative tourism, smart growth, and managing tourism. Under these principles, there is an opportunity to evaluate the role of the Shore Lands designation in the development of tourism along the shoreline.

Connection to Shore Lands

As mentioned, traditionally, tourism in Prince Edward County has been concentrated along its shoreline. Sandbanks Provincial Park still remains the largest draw in the region.¹⁴ However, alternative forms of tourism have also emerged, including agritourism, which has shifted some activity away from the shorelines. The purpose of our analysis is to assess the capacity of Shore Lands, and associated land use policy, in balancing the needs of tourism in the county.

Opportunities and Challenges

Important considerations for the development of *inclusion criteria* include:

- **Seasonal tourism**
- **Impact to adjacent lands**
- **Conventional resorts versus the emerging alternatives**
- **Effects of short-term accommodations**
- **Incorporating sustainable environments**
- **Managing growth**

Each of these considerations represents a challenge which can be framed by resiliency to present opportunities within Shore Lands. For example, locational or place-driven development could be used to satisfy changing tourism demands across Prince Edward County.

¹¹ Prince Edward County, "Destination Development Strategy,"

¹² Ibid.

¹³ Ibid.

¹⁴ Prince Edward County, "Tourism Management Plan."

A4.4 Character

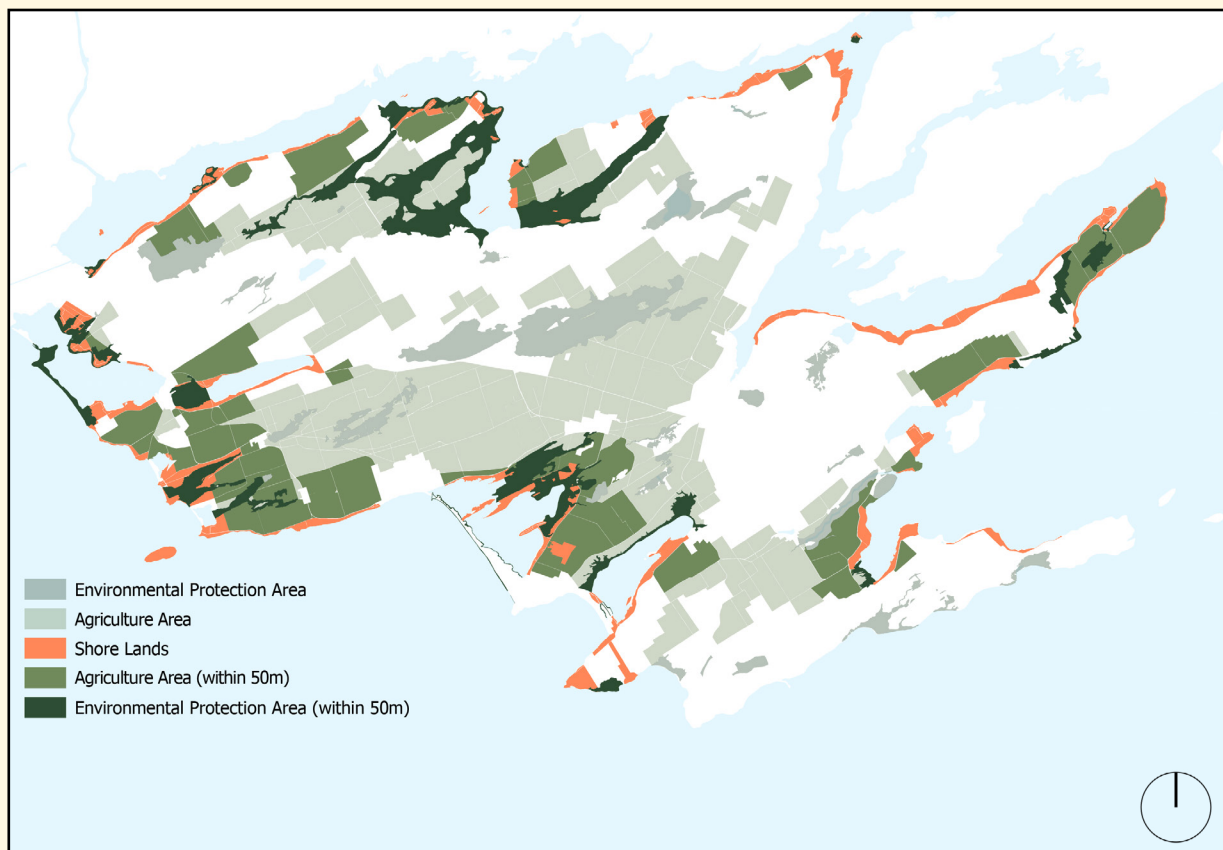
Overview

The distinctive natural environment and agricultural heritage of the County has contributed to the rural charm that makes the area attractive to both visitors and residents. The economy within Prince Edward County relies on its heritage. The ongoing residential and tourism growth has the potential to jeopardize the characteristics that make the area so attractive, particularly the strong agricultural sector and natural environment.

Agriculture is still the second largest employment sector in PEC, representing approximately 6.5% of the total workforce.¹ The majority of farms are smaller-scale, between 10-129 acres.² Intensive or incompatible development in close proximity to farms can create challenges for the agricultural sector, which would compromise a key economic driver, as well as elements of the collective community identity. The County's identity is also closely linked to its beautiful shore lines, natural environment, and access to its bays and lakes. This rural character is a basis for social capital, culture, identity and sense of belonging, as emphasized in the *Official Plan* and in Prince Edward County's *Sustainable Tourism Plan*, produced by a Studio group from last year's cohort.³ As part of the *Sustainable Tourism Plan*, one business owner observed that "too many short term accommodations take away from neighbourhood vibrancy due to revolving guests and vacancy throughout the winter."⁴


Connection to Shore Lands

Shore Land areas have a significant interface with both agricultural lands, and environmentally significant features.



Map 8: Map showing the lands designated as Environmental Protection Areas and Agricultural areas that are within 50 metres of Shore Lands.

The natural features such as wetlands, coastal dunes, alvar ecosystems, and forests provide high quality, diverse habitats to support a range of flora and fauna, as well as the ecosystem services to support the



county as a whole.⁵ Incompatible land use patterns along shore lines has the potential to harm both the natural environment and key agricultural resources which can lead to less fulfilling experiences for both residents and visitors.

Opportunities and Challenges

Key considerations relating to this theme will include:

- **Preservation of agricultural lands**
- **Promoting Sensitive Adjacent Development**
- **Fostering Inclusivity and Diversity**

Appendix 5: Case Study Details

Case Study 1: Tofino, BC



- Tofino is a popular ecotourism destination on Vancouver Island that has had to manage housing affordability challenges, overtourism, as well as shoreline, natural heritage, and character protection.
- One of the land use planning tools they use are Development Permit Areas (DPAs). Each DPA has associated design guidelines within the Zoning By-law for land use and development decisions, and development permits are required to alter, develop, or subdivide lands in a designated DPA.¹
- DPAs provide detailed and context-specific guidance on several different themes, including building form, siting, exterior design and finish of buildings, landscaping and streetscape, signage, drainage, shoreline protection, and natural environment.
- Tofino's shoreline is covered by a number of different DPAs that each have different guidelines based on their unique context.
- DPAs are an enforceable legislative tool. By including DPAs directly in their Zoning By-law, The District of Tofino is better able to coordinate zoning and DPA regulations; as well as streamline development approvals processes, improve comprehensive zoning tools, and strengthen the enforcement of development permit infractions.

1

District of Tofino, "Official Community Plan Bylaw No. 1290, 2021."

Case Study 2: Watkins Glen, NY



- Watkins Glen is located in Schuyler County along the shores of Seneca Lake in the Finger Lakes Region of Upstate NY. Schuyler County is a vibrant community of small towns and villages supported by a thriving agricultural, winery and tourist industry. It acknowledges the importance of the Seneca Lake waterfront to past and future development and character in this area.²
- In 2013, The Village of Watkins Glen implemented a Waterfront Master Development Plan. The purpose of the plan was to acknowledge the importance of the Seneca Lake waterfront to past and future development and character in this area.³
- Recommendations from the Waterfront plan were incorporated in the County's Comprehensive Plan and Zoning By-laws, with the primary goal of ensuring the protection of character as it is essential to preserving residents' quality of life as well as the county's economic well-being.⁴
- All development on the waterfront is zoned through the "LD-Lakefront Development" zone, which permits a range of residential, commercial and tourist recreational uses along the shoreline. All uses and development shall be sensitive to the natural environment of the lakefront and the value that the lakefront provides to the Village as a whole.⁵

² Schuyler County, "Schuyler County Comprehensive Plan."

³ Village of Watkins Glen, "Local Waterfront Revitalization Program."

⁴ Ibid.

⁵ Village of Watkins Glen, "Zoning Code."

Case Study 3: Lincoln County, OR



- Lincoln County is situated on the central Oregon coast. Known as the Heart of the Oregon Coast, the County is popular for its extensive publicly accessible beaches and proximity to national protected areas. With tourism quickly becoming the area's largest economic driver,¹ the County is now tasked with accommodating increasing pressures of development and potential overuse. This causes stress on the natural features and character that make up its shoreline.
- Lincoln County has implemented a "Coastal Shorelands (CS) Overlay Zoning" as a tool to meet the state-mandated Beach Bill:²
- Which is a famous piece of legislation establishing a permanent public easement for access and recreation along the ocean shore regardless of ownership.³
- The state wide Coastal Shorelands Planning Goal 17 supports cities and counties in meeting this mandate, requiring both to have plans to provide public access to the beach. Requiring the government to both protect and replace access sites if damaged.⁴
- The Coastal Shorelands (CS) Overlay Zoning works in conjunction with applicable underlying zones on the county's defined shoreline. It is used to implement the Coastal Shorelands policies contained in the Lincoln County Comprehensive Plan.⁵
- There are specific pre-development standards with associated requirements including minimum setbacks in relation to significant environmental protection areas, shoreland stabilization and land division guidance to be applied and met if triggered by specific development when reviewing applications for land use in the CS Overlay zone.
- The Coastal Shorelands Overlay Zone's associated policies and pre-development requirements are enforceable under Lincoln County's Comprehensive Plan Zoning requirements.

1 Dean Runyan Associates, "Oregon Travel Impacts: Statewide Estimates 1992 - 2017p."

2 Lincoln County, "Lincoln County Code. Land Use Planning. Chapter 1," 98-99.

3 Sullivan, "Shorelands Protection in Oregon."

4 State of Oregon, "Oregon's Coastal Planning Goals."

5 Lincoln County, "Lincoln County Code. Land Use Planning. Chapter 1," 18-19.

Case Study 4: Door County, Wisconsin



- Door County has 450 kilometers of shoreline on Lake Michigan and is affectionately referred to as the Cape Cod of the Midwest. While it is popular for its beaches and fall colours, the County struggles with frequent flooding, overtourism and protecting the natural environment.⁶
- Door County has implemented the state-mandated "Shorelands Ordinance" which seeks to better manage development at the water's edge.⁷ All lands within 1000 ft of a lake's ordinary high water mark are considered under the Shorelands Ordinance.⁸
- When landowners wish to increase their lot cover, increase impermeable areas, or otherwise alter the natural shoreline, the development must include mitigation measures to offset the impacts.⁹ The impacts from development are assigned a number of points based on the significance of the environmental footprint. There is a suite of mitigation measures available that each have different points allocated, the landowner may choose amongst them to reach the required number of mitigation points. This is similar in nature to the Toronto Green Standard, but is specific to shoreline protection.
- The requirements for mitigation measures, setbacks, minimum lot sizes, and vegetation are enforceable through Door County's Zoning By-law.¹⁰

6 Koran, "The Water Always Wins."

7 State of Wisconsin, "Chapter NR 115 Wisconsin's Shoreland Protection Program."

8 Door County Resource Planning Committee, "Door County Shoreland Mitigation Handbook."

9 Ibid.

10 Door County Land Use Services Department, "Door County Shoreland Zoning."

Case Study 5: Collingwood, ON



- Collingwood is a booming tourist destination due to its location on the southern shore of Georgian Bay, as well as its proximity to Blue Mountain Resort. The town faces some similar challenges to PEC in terms of tourism pressures, increasing land values, workforce housing shortages, and protecting the natural environment on its shorelines and beyond.
- Collingwood has a Waterfront Master Plan, which focuses on the revitalization of its waterfront, improving access to water and recreation opportunities, enhancing public space, promoting sustainable development, and protecting natural resources. The plan includes design guidelines for waterfront development, as well as parks and trails.¹
- Collingwood's Official Plan also has special provisions for development along certain areas of its shoreline. For example, an area called the "Shipyards" has been designated as a Special Policy Area, partly due to shoreline hazards related to flooding, erosion, dynamic beach, and wave uprush. The OP dictates that a Shoreline Study be completed as a component of a Master Development agreement for the area, and it "must identify the means to address the hazard and the means to maintain the shoreline protection works in perpetuity."²

¹ Town of Collingwood, "Collingwood Waterfront Master Plan."

² Town of Collingwood, "Official Plan (Consolidated January 2019 Version)," 84–85.

Case Study 6: Lake of Bays, ON



- Lake of Bays is a lower tier municipality located in the District Municipality of Muskoka, adjacent to Algonquin Park. The Township boasts picturesque landscapes on over 100 lakes, and nearly 170 km of shoreline.³
- The Lake of Bays Official Plan outlines the vision for the community. The vision statement emphasizes the need to promote a sustainable natural environment, while encouraging a sound economy and good quality of life.⁴
- The OP also includes a Waterfront land use designation, which includes all lands within 150 m from the shoreline. The designation is flexible, and can also include other lands that are functionally related to the shoreline.⁵
- The township has been using a Development Permit System (DPS) since 2004.⁶ They are currently reviewing their Zoning and DPS By-law, and have a proposed Community Planning Permit System (CPPS) By-law that is under public consultation. The By-law defines several Permit Areas which include Residential, Resort Commercial, Service Commercial, Open Space, and Environmental Protection. Within each Permit Area, permitted uses are defined, as well as discretionary uses.⁷
- The Lake of Bays township offers insight into the articulation of different styles of waterfront development. Certain areas of the Shore Lands may be appropriate for commercial uses, however other areas may only be able to support residential uses or open space. The implementation of the CPPS by-law also offers insight into alternative planning processes that link more clearly with Official Plan policies.

3 Discover Muskoka, "Lake of Bays."

4 Township of Lake of Bays, "Official Plan."

5 Ibid.

6 Township of Lake of Bays, "Community Planning Permit System."

7 Township of Lake of Bays, "Draft Community Planning Permit By-Law 2021-111."