

# Chapter 4



*It's an area of hope for people... The Acadian people come here and remember and treasure it; it helps to build their community and gives us hope all for the future that we can be recognized, and be seen as equals and have our own individual stories.*

Peter Herbin, local resident and descendant of the founder of the memorial park, that would become the national historic site

## 4.0 State of Conservation and Factors Affecting the Property

### 4.a. Present state of conservation

Six different authorities are responsible for different elements of the nominated property. Information on the present state of conservation of the nominated property is therefore derived from these

sources and their monitoring programs. The authorities and their responsibilities are listed in Table 4-1, below.

Authority	Level of government	Jurisdiction
Parks Canada Agency	Federal	Only on Parks Canada administered land (Grand-Pré National Historic Site of Canada, Horton Landing, cairn commemorating the Attack at Grand Pré): archaeological sites, field patterns, commemorative buildings, structures, and gardens
Nova Scotia Department of Agriculture	Provincial	Dykes, <i>aboiteaux</i> , dykeland, farmland, drainage (cost-shared with the Grand Pré Marsh Body)
Nova Scotia Department of Tourism, Culture and Heritage – Heritage Division	Provincial	Archaeological sites (outside Parks Canada land)
Nova Scotia Department of Transportation and Infrastructure Renewal	Provincial	Public road network
Municipality of the County of Kings	Municipal	Farmland, settlement pattern
Grand Pré Marsh Body	Local	Roads, drainage (cost-shared with the Department of Agriculture)

Table 4-1 Grand Pré authorities and responsibilities

Professionals within each agency or department performed the condition assessments. For ease of reporting, the regulatory authorities developed a single rating scale (good–fair–poor) to assess the condition of the various attributes. Table 4–2, Rating for condition assessments, defines these terms.

Rating	Definition
Good	Near ideal condition.  No risk of accelerated deterioration.  Any issues can be rectified through routine maintenance.
Fair	Normal condition.  Little or no risk of accelerated deterioration.  Any issues can be rectified through routine maintenance.
Poor	Below normal condition.  Evidence or risk of accelerated deterioration.  Issues cannot be rectified through routine maintenance.

**Table 4–2** Rating for condition assessments

A multi-disciplinary team of professionals assesses the condition of cultural resources at Parks Canada within the context of a Commemorative Integrity Statement. This feeds into the State of the Site Report prepared every five years. The most recent report dates from 2009 (Appendix 6C). *The Cultural Resource Management Policy*, the *Standards and Guidelines for the Conservation of Historic Places in Canada* (Appendix 4G), and various specific policies guide the development of conservation measures.

The condition of dykes is assessed by the Aboiteau Superintendent for the Grand Pré dykelands. As a staff member of the provincial Department of Agriculture, the superintendent visually assesses the conditions of dykes at least twice a year. A similar exercise is carried out to assess the conditions of the *aboiteaux* and the drainage outlets. Members of the Grand Pré Marsh Body also contribute by providing informal reports to the Aboiteau Superintendent. At present, the conditions are recorded on paper and reported to the departmental engineers. A database is scheduled to be in place by 2011 for the digital recording of condition assessments. Conservation measures are applied following best practices in dyke, *aboiteaux*, and drainage maintenance.

The condition of archaeological sites under provincial jurisdiction is assessed when a new site is discovered or at the time of an impact assessment. Sites are otherwise presumed to be in good condition. The development of conservation measures is guided by the Nova Scotia *Special Places Protection Act* (Appendix 3K) as well as the *Standards and Guidelines for the Conservation of Historic Places in Canada* (Appendix 4G).

Roads under provincial jurisdiction are assessed by the Department of Transportation and Infrastructure Renewal for their ability to accommodate a normal volume of traffic.

The availability and condition of agricultural land are assessed by the planners of the Municipality of the County of Kings as well as by the Department of Agriculture.

The Grand Pré Marsh Body can provide additional information on the condition of roads and drainage, and on agricultural use.

Table 4–3, outlines the present state of conservation of the attributes of the nominated property.

Attribute	Condition	Authority carrying out the monitoring	Source	Date of the most recent assessment	Assessment
Archaeological sites (on Parks Canada administered land)	Fair	Parks Canada Agency	2009 Grand-Pré National Historic Site State of the Site Report	2008	Performed as part of the Commemorative Integrity Evaluation and included in the <i>Grand-Pré National Historic Site of Canada State of the Site Report</i> for 2009. The “fair” assessment was because of vegetation-management issues that have since been corrected. Conservation measures include impact assessment, site avoidance, site capping, vegetation maintenance, and research.
Archaeological sites (on provincial Crown land and private property)	Fair	Department of Tourism, Culture and Heritage	Department of Tourism, Culture and Heritage	2010	No specific monitoring. Condition assessed as fair based on potential coastal erosion impacts. Conservation measures focus on mitigating impacts, surveying the sites, and educating the public.
Memorial Church	Good	Parks Canada Agency	2009 Grand-Pré National Historic Site State of the Site Report	2008	Performed as part of the Commemorative Integrity Evaluation and included in the <i>Grand-Pré National Historic Site of Canada State of the Site Report</i> . Regular repointing and shingle replacements. Structurally sound. Conservation measures focus on maintenance.
Herbin Cross	Good	Parks Canada Agency	2009 Grand-Pré National Historic Site State of the Site Report	2008	Performed as part of the Commemorative Integrity Evaluation and included in the <i>Grand-Pré National Historic Site of Canada State of the Site Report</i> . Herbin Cross is in good condition. Regular repointing is the main conservation measure.
Deportation Cross	Good	Parks Canada Agency	2009 Grand-Pré National Historic Site State of the Site Report	2008	Performed as part of the Commemorative Integrity Evaluation and included in the <i>Grand-Pré National Historic Site of Canada State of the Site Report</i> . The Deportation Cross was stabilized during the 2005 relocation to Horton Landing. Conservation measures focus on regular maintenance.
Acadian cemetery	Good	Parks Canada Agency	2009 Grand-Pré National Historic Site State of the Site Report	2008	Performed as part of the Commemorative Integrity Evaluation and included in the <i>Grand-Pré National Historic Site of Canada State of the Site Report</i> . Burials are undisturbed and are not under pressure. Conservation measures focus on avoidance.
Roads (under provincial jurisdiction)	Good – Poor	Department of Transportation and Infrastructure Renewal	Department of Transportation and Infrastructure Renewal	2010	Expert assessment. Roads footprint is in good condition. Road surfaces vary in condition. Conservation measures focus on maintenance.
Roads (under Marsh Body jurisdiction and private ownership)	Poor	Grand Pré Marsh Body (informally)	Grand Pré Marsh Body (informally)	2010	Expert assessment. Road footprint is in good condition. Surfaces are in poor condition. Would require grading and ditch cleaning along the roads.

Table 4-3 State of attributes in the nominated property (continued on next page)

Attribute	Condition	Authority carrying out the monitoring	Source	Date of the most recent assessment	Assessment
Drainage	Good	Department of Agriculture Grand Pré Marsh Body	Department of Agriculture Grand Pré Marsh Body	2010	Minimum of biannual monitoring (spring and fall). Additional monitoring during regular maintenance, after storms, and during extremely high tides. Drainage outlets, <i>aboiteaux</i> , and creeks maintained. Conservation measures focus on maintenance.
Dykes	Good – Fair	Department of Agriculture	Department of Agriculture	2010	Minimum of biannual monitoring (spring and fall). Additional monitoring during regular maintenance, after storms, when ice jams are present, during wind events and during extremely high tides. Varying degrees of impacts from erosion and health of vegetation. Conservation measures include rock facing, regular topping, and vegetation management.
Dykelands	Good	Department of Agriculture	Department of Agriculture	2010	Expert assessment. Conservation measures focus on maintaining the dykelands free from permanent structures.
Farmland (dykelands and uplands)	Good	Department of Agriculture Municipality of the County of Kings	Department of Agriculture Municipality of the County of Kings	2010	Expert assessment. Conservation measures focus on maintaining zoning that encourages agricultural land use. Measures also include dyke topping.

Table 4-3 State of attributes in the nominated property (continued from previous page)

#### Summary of Present State of Conservation

The overall present condition of the nominated property is deemed to be good. Various policies are in place to guide conservation (see Chapter 5), most referring to best practices to carry out conservation and maintenance work, such as on the dykes and roads. The coordinated management of the nominated property, through a

common management and the governance structure, will enhance each agency's ability to deliver comprehensive conservation measures for all types of resources and ensure integrity of the nominated property.

#### 4.b. Factors affecting the property

The factors that can affect the nominated property's outstanding universal value are related to development pressures, environmental pressures, and visitor and tourism pressures.

##### 4.b.i. Development pressures

###### *Sustainability of Agriculture*

The nominated property is a living agricultural landscape, expressed by the enduring agricultural relationship of local communities with the dykeland, and the maintenance of the fertile farmland created from transformed wetlands. The maintenance of an agricultural economy is key to the conservation of the property. For the agricultural landscape of Grand Pré to be preserved and to survive, there must be farmers, and there must be continuing possibilities for agriculture to develop in step with the times. At the same time, agricultural development must proceed hand in hand with conservation of the unique natural and cultural values existing within the nominated property.



4-1 Farmers use modern equipment to farm and maintain the dykelands.

Grand Pré and its surrounding communities are a vibrant agricultural community where modern agriculture is practised. However, like many agricultural communities, it is under pressure from changing demographics, loss of agricultural land to development, and economic realities (see Figure 4-1). Agricultural land in Grand Pré is valuable for its scenery and its importance to tourists and tourism-related businesses, such as farmers' markets and wineries. Agriculture also supports the local economy through food production, value-added processing and agri-tourism.

As a result of changes in the agricultural economy over the years, some farm buildings have been abandoned or are being reused. In general, though, farmers have adapted their buildings to their needs.

Local demographics indicate that most residents are between 40 and 60 years of age and that households are getting smaller. This information supports anecdotal information provided by local farmers about the future of their industry. They are concerned that younger generations are not interested in pursuing farming activities, which puts the agricultural economy's future at risk. Moreover, most new residents are individuals who retire in Grand Pré to enjoy the rural setting while being close to amenities provided by the Wolfville–Coldbrook Development Corridor or even Halifax. Few of the new arrivals actively participate in the agricultural economy.

The number of landowners on the dykeland has decreased over the years, although no land has been left unattended. For the remaining landowners, the burden of responsibilities in maintaining the dykeland increases. This may create an issue of long term capacity to provide the financial and human resources to maintain an effective Grand Pré Marsh Body and implement its role in maintaining the dykeland, thus altering the relationship between the Department of Agriculture and the Marsh Body.

Although most of the land is part of an agricultural district, some exceptions allow for the development of structures that are not related to farming. While the conditions in Grand Pré are ideal for farming, certain pressures make the future of farming in Grand Pré, as in other parts of Nova Scotia, uncertain. In addition to concerns about where the next generation of farmers will come from, farmers

are under pressure from land-use conflicts between agricultural and residential uses. Farmers are also subject to the whims of the market: fluctuating agricultural prices make it difficult for them to ensure a stable income. These problems are not unique to Grand Pré.

The County of Kings has the most agriculturally based economy in Nova Scotia. As reported in the 2001 census, the county's agricultural labour force numbers 2100, with an additional 2200 employed in agriculture-related activities. This local industry represents 30 per cent of the agriculture and 50 per cent of the agriculture-related manufacturing for Nova Scotia. The overall farming capability of the County of Kings is large relative to its modest agricultural land base. The total farm production per capita is 2 ½ times the national average.

Grand Pré's agricultural economy revolves mainly around the production of milk, meat, and fruits. Crops grown in recent years on the dykeland include corn, salt hay, soy, alfalfa, oats, and winter and spring wheat. In the past, the area was renowned for its orchards, mainly apple, but over the past two decades, that industry has decreased in importance. Current expanding industries include grape growing for wine making (in the buffer zone), and cattle raising, mainly for milk production. Profitability in these crops, in milk production, or in value-added products, is essential to maintaining the dykeland and the whole of this unique agricultural landscape. Although no specific data exists for farmers working in and around Grand Pré, they may be faring better than others in the province, since much of their production relies on supply and demand quotas, ensuring stability.

#### *Densification and Use Encroachment*

Densification (the increase in building density) and use encroachment of private property on the uplands are pressures that affect the integrity and authenticity of the nominated property's distinctive settlement pattern. This settlement pattern is characterized by particular field patterns, roads, a dispersed settlement, and an active agricultural system. Use encroachment is the intrusion of one type of land use onto land that is zoned for a different use. Since the majority

of the nominated property is part of an agricultural district, densification and use encroachment affect the dykeland, the uplands, the national historic site and the archaeological resources.

Fortunately, the *Agricultural Marshland Conservation Act* (Appendix 3F) and its *Grand Pré Marsh Body Land Use Regulations* minimize the pressure of densification and use encroachment on the dykeland. According to the Act and Regulations, no development can be accommodated on the designated marshland unless a variance permit, or an exemption, is granted by the government of Nova Scotia to allow for the construction of roads, the installation of utility poles or the installation or construction of structures used for the generation of power. In addition, the dykelands are zoned O1 Environmental Open Space, allowing agricultural activities but no permanent structures unless a provincial variance is granted.

Densification can also result from permitted smaller lot sizes. On the dykelands lot sizes vary depending on location and ability to drain. Development is not permitted unless a municipal re-designation and rezoning is approved. In Grand Pré Hamlet, zoned as Hamlet Historic Residential (R9), lot size requirements are a minimum of 50 000 square feet (4645 square metres), whereas in the Agricultural (A1) zone, which includes Hortonville, lot size requirements are a minimum of 20 000 square feet (1858 square metres). However, the *Grand Pré and Area Community Plan* (Appendix 2J) requires a minimum lot size of 50 000 square feet for all new non-farm dwellings in the A1 Zone.

The current *Municipality of the County of Kings Municipal Planning Strategy* (Appendix 4D), amended in 2009, does not allow for non-farm-related structures to be built on agricultural land unless the lot was created prior to August 1994, is designated as an agricultural infill or abandoned resource-extraction site, or has poorer quality soils subject to an agrologist's report. Agricultural infill sites are defined as lots with existing dwellings on both sides and within 400 feet (122 metres) of each other or within 400 feet of a road right-of-way. Although these lands are permitted as agricultural infill, they have limited potential for agriculture production.

Approximately 64 permanent residences lie within the nominated property: 20 in Grand Pré Hamlet and the remainder in

Hortonville. An estimated 14 lots fall within the parameters of a pre-1994 or infill lot, representing a total potential increase in densification of 22 per cent. This percentage excludes any potential to build additional structures in areas zoned agriculture.

Densification could put pressure on archaeological sites in an area that is historically known to have been heavily populated and used in the 17th, 18th, and 19th centuries. However, community members have collaborated with archaeologists for many years in reporting, locating and identifying archaeological sites. Many have been instrumental in protecting key attributes of the nominated property, such as above-ground remains of an old Acadian dyke, Acadian and Planter cellars, Aboriginal artifacts, and old *aboiteaux*. Most of these discoveries were accidental and were found on privately owned land. To ensure that all archaeological evidence is identified, clear guidelines have been developed for the reporting of all archaeological finds on private property. These guidelines, found within the *Strategy for the Management and Conservation of Archaeological Heritage in the Landscape of Grand Pré* (Appendix 2B), have been endorsed by the provincial and municipal authorities and Parks Canada Agency. Information will be provided to local residents on reporting and protecting archaeological evidence.

Use encroachment mainly takes the form of agricultural uses encroaching on road rights-of-way that are no longer in use. This is particularly apparent in Hortonville's town grid. Maintained roads are protected, however, because they are public. Agricultural zoning now prevents any future densification that might result from use encroachment.

#### *Alternative Energy Sources*

The flat dykelands of the Grand Pré landscape, coupled with winds coming off the Minas Basin, create a desirable location for wind turbines. Alternative energy sources could put increased pressure on the authenticity and integrity of the nominated property. The area is identified on Nova Scotia's wind-resource map as having moderate potential for the installation of utility-sized wind turbines. At 80 metres (262 feet) above ground level (AGL), the average wind speed

is calculated at approximately 6.5–7.0 metres per second (m/s) (21.3–23.0 feet/second); at 50 metres (164 feet) AGL, the average wind speed is approximately 6.0–6.5 m/s (19.7–21.3 feet/second); and at 30 metres (98.4 feet) AGL, the average wind speed is approximately 5.5–6.5 m/s (18.0–21.3 feet/second). Large utility-sized wind turbines are between 40 and 80 metres (131–262 feet) in diameter, with tower heights of up to 100 metres (328 feet). To create a viable operation, a wind farm would require a large number and concentration of turbines. At present, the *Grand Pré and Area Community Plan* (Appendix 2J), allows only small-scale wind turbines in the nominated property, forbidding the construction of large-scale wind turbines. Small-scale turbines are less than 52 metres (170 ft) in height and produce less than 100 kW.

While this may be an attractive location for energy companies to generate alternative energy, no such proposals are currently being considered.

The use of tidal power is another major alternative source of energy being explored in the area. Nova Scotia Power and the government of Nova Scotia have been testing the tidal power potential of the Minas Basin by placing turbines at the bottom of the basin in an area close to Parrsboro, about 20 kilometres north of the Landscape of Grand Pré. Increased siltation in the region may be an impact from the turbines; however, the extent of siltation and other impacts are unknown and require further study.

#### **4.b.ii. Environmental pressures**

##### *Coastal Change and Rising Sea Levels*

Coastal change and rising sea levels are constant environmental pressures exerted on the nominated property, affecting mainly the dykes and shoreline along the east and west sides of the nominated property, as well as the north shore in the buffer zone. A coastal change study completed in 2010, *Overview of Coastal Change Influences on the Landscape of Grand Pré* (Appendix 6E), confirmed that coastal change, including coastal erosion and coastal regeneration, is occurring around the nominated property and buffer zone.



The nearly 13 kilometres of coastline, composed of geological materials that erode easily, such as sand, shale and gravel, are subjected twice a day to the highest tides in the world. Because of the range of the tides and the height of waves during storms, coastal change is a continuing concern and presents a significant risk to the local economy and cultural resources on the nominated property. Various mitigation strategies have been used to minimize the effects of coastal change, particularly erosion; however, the effects cannot be completely eliminated. Dykes have been maintained to ensure their stability and integrity, and shorelines, in some cases, have been protected by building rock faces.

Archaeological evidence indicates that many of the original dyke walls are buried under 1.5 to 1.8 metres of sediment, a testament to the steady rise in sea levels and alteration to the coastline. An average of 15 metres (50 feet) of shoreline erosion occurred along the North Grand Pré coastline between 1961 and 2002 according to aerial comparisons, with coastal erosion ranging from 0.3 to 68.4 metres (0.97 to 224.34 feet). Furthermore, on Boot Island, an average annual decrease of shoreline over two-year intervals was recorded from 1990 to 2008 at a rate of 0.34 to 0.85 metres per year (1.11 to 2.79 feet per year). Although coastal erosion is taking place along the east and west sides of the marsh, there is evidence of salt marsh regeneration. Salt marsh regeneration is a natural occurrence, but scientists do not fully understand the process. Map 7: *Coastal Change in the Nominated Property and Buffer Zone* illustrates the coastal changes.

With sea levels anticipated to rise 70 to 140 centimetres over the next century, and with more intense storm surges expected, it is anticipated that the dykes bordering the Grand Pré region will need consistent maintenance to minimize the hazard of dam breaches and to ensure that the dykelands contribute to the economic and cultural climate of the Grand Pré region. However, topping up the dykes increases their weight, and the added weight makes them slowly sink over time.

Coastal change is not fully understood. Additional studies are underway on the effects of coastal change in the area and on the effects of the various protection mechanisms in place. Continual monitoring and maintenance of the dykes are expected to reduce the negative effects of coastal change.

#### 4.b.iii. Natural disasters and risk preparedness

The nominated property is vulnerable to strong storms throughout the year. During hurricane season, which typically extends from June to November, the Province of Nova Scotia is sometimes in the path of tropical storms. The main risk is for the nominated property to be flooded as a result of a combination of exceptionally high tides and strong winds or as a result of dyke failure. Should the nominated property flood, the land would be rendered unusable for agriculture for up to three years. If that were to happen, farmers would require support from federal and provincial agriculture programs designed to assist farmers in repairing any damage. Any damage to the dykes is the responsibility of the provincial government. The Aboiteau Superintendent visits the nominated property following severe storms to assess and repair the dykes if needed.

Fire is another natural hazard. The risk is mainly to the Memorial Church.

#### *Roles, Responsibilities, and Coordination in the Event of a Natural Disaster*

Risk preparedness is a shared responsibility among several jurisdictions.

The Municipality of the County of Kings has an *Emergency Response Plan* (Appendix 4F) managed by its Emergency Management Coordinator (EMC), in accordance with the Province of Nova Scotia's *Emergency Management Act* (Appendix 3I). In the case of an emergency, the municipality is the first responder. It may request assistance from the provincial Emergency Management Office if the severity of the emergency requires it. The EMC focuses on protecting lives and personal property.

In case of dyke rupture or flooding of the dykelands, the Department of Agriculture implements its own emergency preparedness plan that addresses the main priorities and resources that need to be considered during such an event. The Municipality of the County of Kings' EMC is the first responder and would coordinate with the Department of Agriculture to consolidate the dykes. The priority of the Department of Agriculture is to protect the dykes and the farmland.



Financial assistance is available to those farmers whose fields are affected. Depending on the severity of the damage, financial assistance may come from the Province of Nova Scotia or from the federal government.

Parks Canada is responsible for protecting the memorials since they are all located on Parks Canada administered land. The agency has protocols and tools in place to react to fires. These include a direct line to the local fire department, fire alarms, and fire-suppressant mechanisms in the visitor centre and in the Memorial Church. In addition, the memorials have been recorded to provide information in case they should need to be repaired or rebuilt. The local fire department is responsible for coordinating the response.

#### *Principles for Mitigating Risk*

A framework for managing natural disasters has been prepared. It outlines roles, responsibilities and procedures to mitigate the risks and effects of such disasters. These roles, responsibilities and procedures have already been agreed to by jurisdictions responsible for natural disaster response on the nominated property.

Multiple jurisdictions have authority to manage the consequences of a natural disaster depending on its severity: Société Promotion Grand-Pré, Parks Canada, Grand Pré Marsh Body, Municipality of the County of Kings, and the Nova Scotia Department of Agriculture. A number of principles have been prepared to help guide their preparation, intervention, and recovery actions.

These principles include the following:

- Preparedness will focus on providing additional protection against the main risks to the key attributes of the nominated property that support the outstanding universal value. Preparedness will also integrate relevant heritage considerations within the overall disaster-prevention strategy.
- Training will be provided to jurisdictional managers and emergency-management officers on the nominated property's outstanding universal value, key attributes, and conservation considerations.
- During responses, every effort will be made to maintain the integrity of the key attributes.

- Recovery actions and mitigation activities will maintain the integrity and authenticity of the key attributes linked to the outstanding universal value.
- Regular review and update of response plans will ensure that adequate strategies are in place.
- The response plan is conceived in terms of the whole property and provides integrated concern for the structures, the archaeological sites, and the landscape features.

#### *Key Elements of Risk Preparedness*

Emergency management focuses on the before, during and after of particular events. Therefore, in effect, risk preparedness is one aspect of emergency management.

In the case of the nominated property, the natural-disaster management framework provides the broad strokes of preparedness, response, and recovery actions. It focuses strictly on managing these with relation to protecting the nominated property's outstanding universal value and key attributes, and addresses some elements of visitor management.

#### **4.b.iv. Visitor and tourism pressures**

Visitor and tourism numbers are not expected to increase substantially and are therefore not considered a significant pressure on the nominated property. According to the study commissioned by Nomination Grand Pré in 2009, *Grand Pré: An Economic Impact Assessment of a UNESCO World Heritage Designation* (Appendix 7B), a 6.2 per cent increase in tourism per year is expected if the nomination is successful. This figure is based on previous tourism trends at the Grand-Pré National Historic Site of Canada and other World Heritage Sites. This would put the number of visitors to just over 30 000 per year. As tourism numbers in the area were significantly higher in the late 1990s, at 62 000 visitors, the area is capable of accommodating more tourists than the projected 6.2 per cent increase (see Figure 4-2).



4-2 The national historic site has the capacity to accommodate an increased number of visitors.

#### Carrying Capacity

The nominated property’s carrying capacity is defined as its ability to sustain the pressure from visitors and tourism-related activities. This includes limits of acceptable change and the ability for the visitor to experience the nominated property’s important attributes without harming them, or without the tourism-related services affecting them. Based on the 2010 *Tourism Strategy and Interpretation Framework for the Landscape of Grand Pré* (Appendix 2E), an increase in tourism at the nominated property would have both positive and negative impacts. These impacts suggest that the area has the capacity to adapt to increased tourism activity without harming the nominated property. The 2010 Strategy suggests that there are significantly more potential

positive impacts than potential negative impacts resulting from a World Heritage inscription and concludes that the nominated property is able to sustain the consequences of inscription on the World Heritage list.

Potential positive economic and cultural impacts resulting from inscription on the World Heritage List are shown in Table 4-4.

Increase in visitation	A conservative estimate of non-resident visitation suggests that an increase of 6.2 per cent will result from a UNESCO inscription. Although modest, this increase is seen as positive.
Incremental spending onsite and offsite	As the site becomes a distinctive attraction, an analysis of trends projects a 20 per cent increase in the average length of stay, a 15 per cent increase in visitor expenditure as a result of additional opportunities, and an additional 3000 visitors annually to the region (the County of Kings and the surrounding area to the Town of Windsor) as a result of the inscription, with an incremental impact of another \$450 000 annually. The total tourism expenditure impact in the region is projected to be close to \$1 M annually, directly and indirectly.
Employment	Any new infrastructure, interpretation programs, and tourism services will lead to additional employment.
Local businesses	Although it is not likely that significant new business activity would result from the inscription based on the modest visitation increase, nevertheless the marketing cachet for the region will help local and regional tourism-oriented businesses in their marketing efforts.
Cultural preservation	The inscription and the interpretation of the area’s heritage will contribute to the preservation of cultural heritage.
Educational opportunities	Onsite interpretive programs and outreach activities will provide specific educational opportunities for the general public.
Environmental conservation	The inscription and expansion of protected areas through additional land acquisition and site-management controls will help preserve the natural environment.
Community pride	A inscription will boost community pride, which spills over into community enhancements and beautification activities.

Table 4-4 Economic and socio-cultural impacts

Potential negative impacts were identified related to visitor experience, the agricultural economy, the relationship of residents to the local setting and community, and resource protection and property values. The 2009 assessment concluded that these negative impacts are unlikely to occur, because the current infrastructure is capable of handling projected increases in tourism.

**4.b.v. Number of inhabitants within the property and the buffer zone**

The total population of the nominated property and buffer zone varies according to the season (see summary in Table 4-5). Cottagers who reside in the buffer zone during the summer, especially around Evangeline Beach, will increase the population by about 60 per cent. Population estimates for the buffer zone are based on persons per dwelling: 2.4 persons per dwelling for year-round residents and 2.0 persons per dwelling for seasonal residents. Within the nominated property, residents are considered year-round, and the estimate of 2.4 persons per dwelling is applied. The population for the nominated property and buffer zone is only an estimate, because Canadian privacy laws prohibit the collection of actual population numbers for a community of this size. The persons-per-dwelling estimate came from trends within the 2006 Statistics Canada census data.

The nominated property has an estimated 64 year-round occupied dwellings with approximately 154 inhabitants. The buffer zone has an estimated 296 year-round occupied dwellings with an estimated 710 residents. Additionally, 67 seasonally-occupied dwellings and 130 seasonal trailers are within the buffer zone, increasing the seasonal population by an estimated 394 inhabitants. In total, the population for the nominated property and buffer zone is approximately 1258.

Area of the nominated property	1323 hectares
Area of land component of the buffer zone	1248 hectares
Estimated number of inhabitants in the nominated property	154
Estimated number of year-round inhabitants in the buffer zone	710
Estimated number of seasonal inhabitants in the buffer zone	394
Total inhabitants	1258

**Table 4-5** Details of the population of the nominated property for the year 2006

