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**The Northumberland Strait Crossing Project**  
Projet de traversée du Déroit de Northumberland  
Die Ueberguerung der Meerenge von Nordthumberland

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## SUMMARY

The construction of a fixed link in the Northumberland Strait between the Canadian provinces of New Brunswick and Prince Edward Island is not a novel idea, i. e. it has been the subject of a century old debate. The concept of a link, whether a tunnel, causeway, or bridge, experiences periodic revivals. The debate progressively became part of the Prince Edward Island tradition, but the public now expects that project development should not only consider the effects of the environment on a project but also the impact of that project on the environment in its broadest sense.

### Projet de traversée du Déroit de Northumberland

#### Résumé

La construction d'une liaison permanente sur le Déroit de Northumberland entre les provinces canadiennes du Nouveau-Brunswick et de l'Ile du Prince Edouard n'est pas une idée nouvelle. Elle fait l'objet d'un débat centenaire. La conception d'une liaison - qu'il s'agisse d'un tunnel, d'une route ou d'un pont - est soumise à des considérations périodiques appartenant à la tradition de l'Ile du Prince Edouard. Mais la population exige maintenant que le projet ne considère pas uniquement l'influence de l'environnement sur le projet mais aussi l'impact du projet sur l'environnement dans son sens le plus large.

### Die Ueberquerung der Meerenge von Nordthumberland

#### Zusammenfassung

Der Bau einer festen Verbindung zwischen den kanadischen Provinzen New Brunswik und Prince Edward Island über die Meerenge von Nordthumberland ist keine neue Idee; schon seit einem Jahrhundert wird darüber diskutiert. Ob ein Tunnel, ein Damm oder eine Brücke gebaut werden soll, steht immer wieder zur Debatte. Diese Debatte gehört mittlerweile zur Tradition von Prince Edward Island, aber die Oeffentlichkeit erwartet heute, dass bei der Planung dieses Projektes nicht mehr nur die Auswirkungen der Umwelt auf das Projekt, sondern auch die Auswirkungen des Projektes auf die Umwelt berücksichtigt werden.



## 1. ONE CENTURY OF DEBATE

The nature of the public debate has evolved substantially over the past century depending largely upon the preoccupations of the time, such as, nation building, economic growth, industrial development or, most recently, the concerns over the environment. In all cases, the discussion was centred around the basic need that people have to keep control over their own lives and their collective destiny.

The idea of providing continuous communication between the Island and the Mainland was a condition enshrined in the Terms of Confederation, signed between the Federal Government and the Province of Prince Edward Island when it joined Canada in 1873. At that time ice breaking ferries were not reliable for the transportation of people and goods across the Strait in all seasons.

In 1885, John Howlan, a Senator from the Island, first conceived the notion of a link, and his persistent lobby for a tunnel eventually led to the first feasibility studies. Evidently in those days, public participation consisted of the enrolment of the opinions behind the idea of a link. Like the construction of the intercontinental railway system, the fixed link was one of several major projects which were essential elements in the building of a new and prosperous country. If you were of the opinion that the union with Canada was a positive step in the history of your island, you certainly became a supporter of the link. The technology which came out of the first world war led to the construction of efficient ice breaking ferry boats, and the idea of a link was abandoned as the first all season ferry service started in 1917.

In the 60s, the pursuit of affluence was on the mind of North Americans. The notion of a fixed link was revived as an instrument of economic prosperity. In 1967, a serious attempt to build a causeway-bridge was undertaken and approach roads were built to connect with the Prince Edward Island and New Brunswick highway networks. The participation of the public in this endeavour was minimal as no formal consultation process was in place. The desire for prosperity was the main motivator and the notion of environmental protection was in its infancy. In 1968, as the project was ready to be awarded, the Island opted for a 15-year development plan and an improved ferry system.

Since 1968, traffic had been increasing considerably, ferry costs were rising, and there were expressions of discontentment with the level and quality of the ferry service especially during the summer months.

In 1985 and 1986, some private sector Canadian companies submitted unsolicited proposals for the construction of a fixed link, with the conditions that the Federal Government would make available the subsidies which are presently granted to the ferry service and that the developers could charge tolls. This presented a window of opportunity which the government could not afford to ignore. At a time when considerable strain is placed upon the public purse, this venture fits into the policy decision of the present government to rely on the private sector for major development initiatives and leadership of the economy. In 1987, the government authorized the necessary studies to determine the feasibility of such a project and to gauge private sector interest in developing the link.

## **2. THE ENVIRONMENTAL ASSESSMENT AND REVIEW PROCESS**

In Canada the Federal Government has established formal project development guidelines which have the force of law. Essentially, they reflect the high level of awareness of our citizens over environmental matters and constitute a democratic response of government to their exigence for public consultation. All federal development projects are therefore subject to the Environmental Assessment Review Process (EARP), from the early planning stages through to the construction phase. These legislated guidelines include a full Initial Environmental Evaluation and require that the initiating departments, in this case Public Works, ensure that the public has access to project information and the opportunity to respond to the proposal.

Public Works Canada's original feasibility studies, coupled with a comprehensive program of public participation, constituted the main body of the mandatory Initial Environmental Evaluation.

Early consultation revealed that public support for the project would not be readily obtained. The legacy of controversy which had marked the project history was enhanced by the current issues of protection of the environment and preservation of the Island way of life. The process guaranteed that the project could not possibly proceed unless the public was satisfied that the resulting level of socio-economic and environmental impact was acceptable. This principle directed the requirement for public participation in its development. As a responsible proponent and because of the necessity to abide by the EARP process, we knew that the public had to be more deeply involved in the planning.

Public Works developed a strategy which provided full access to all project information including the compendium of studies, impact identification and analyses as well as decision timeframes. The strategy also outlined and directed the inclusion of public comment into the project development which dealt with the environmental and socio-economic impacts of a link. The idea being that, even as responsible initiator, it is not good enough to conclude that the level of impact is acceptable, you must conform to the public's view as to what constitutes acceptable impact.

The cornerstone of public involvement in the project is a two-way communication thrust. On one hand, the quality of the public input in the project depended largely upon their understanding of the project alternatives and their consequences. On the other hand, mechanisms had to be established to encourage public discussion and to gather the public input. It was clearly understood that public information was the key needed to a successful public participation process.

One of the main stays of our public information campaign has been the establishment of a street level office in Charlottetown. It works as a resource centre making our studies available to everyone interested and encouraging drop-in visitors to discuss the issues related to the project. With time, this office became a focal point for the media to access information and project staff. Another successful endeavour has been the publication of STRAIT FACTS, a public newsletter with broad distribution. This newsletter is still published on an ad hoc basis and continues to report on the issues and events related to the project. Its primary purpose is to provide a forum for public comment.



### **3. PUBLIC CONSULTATION AND IDENTIFICATION OF PROJECT IMPACTS**

In order to determine the public concerns and identify the specific groups which were affected, Public Works commissioned a social impact study. Some of these interest groups were visible from the outset, others not so.

It should be noted that identification of impacts, the treatment of these impacts, the project feasibility studies and public information and consultation were part of an ongoing process. These activities, including constant dialogue with the public, took place in parallel and would eventually lead to the determination of project feasibility and project parameters.

To a large extent, ongoing public consultation helped to confirm and refine the impacts which, as a responsible initiator, Public Works had identified. They covered the broad spectrum of socio-economic and environmental consequences of building a link.

The fishermen, through their associations, expressed concerns over the disruption of their activities and of the fishery in general, resulting from the construction of a project of this size in the prolific waters of the Strait. They expressed concerns that bridge piers would create ice jams, affect the ecology of the Strait and delay the start of the fishing season. Fishermen supported a tunnel because it would not impact on the marine environment.

Since the link was to replace the existing ferry service, the ferry workers expressed serious concerns over the abandonment of the ferry service and the loss of their jobs. Also, dwindling economic activity in the two ferry towns of Tormentine and Borden would affect the community at large.

In contrast, other groups such as the tourism and trucking industries, the construction and engineering associations and the potato farmers would benefit from a link and expressed interest in seeing the idea explored further.

Public involvement extended beyond the local interest groups. At the onset a broadly based project planning committee, chaired by Public Works, was formed to ensure consultation with all interested Government parties. The Committee included representation from the Governments of the three Maritime provinces and a dozen federal departments. Their input in identifying impacts and proposing solutions was extremely valuable to the process.

As part of the feasibility studies, we also had to determine if there was enough interest and capacity in the private sector to undertake a project of this significance. Twelve consortia responded to our May 1987 call for expression of interest. The screening resulted in seven developers being shortlisted.

### **4. PUBLIC CONSULTATION AND PROJECT FEASIBILITY**

The compendium of feasibility studies and confidence of the support expressed in the plebiscite led the Federal Government to draw the following conclusions:





1. Either a vehicular tunnel or a bridge would be cost effective and provide continuous transportation between the Island and the Mainland.
2. The project could be undertaken with an acceptable level of risk and socio-economic and environmental impacts could be avoided altogether, reduced or generally mitigated.
3. It was also concluded that the private sector had the capacity to undertake a project of this significance under the specific public/private sector approach chosen.

This approach is often referred to as the **F-BOOT system**. The developer and his team will **Finance, Build, Own, Operate and Transfer** the structure back to the Government, in conformance with the terms of an agreement.

## 5. PLEBISCITE ON PRINCE EDWARD ISLAND

As the project was gaining momentum, the provincial government of Prince Edward Island announced a plebiscite on the issue of a link. In preparation for the plebiscite, the provincial government organized a series of activities to enhance the level of discussion over the project and its impacts. Public Works was invited to participate in panel debates. This provided additional opportunities for extensive public participation.

Two major lobby or interest groups attempted, with a fair amount of success, to crystallize the public opinion. On one side, the "Friends of the Island" showed their strong opposition to the project while the "Islanders for a Better Tomorrow" expressed their conviction that the project should proceed for economic reasons.

On January 1988, in answer to the plebiscite question: "Do you favour the construction of a fixed crossing between Prince Edward Island and New Brunswick?", 59% of the Islanders demonstrated their support for the project and replied "Yes".

## 6. THE PROPOSAL CALL

Subsequently, conditions for the project were established which took into consideration the socio-economic and environmental impacts which we had identified and which had been confirmed and refined through our public consultation process.

1. The majority of the risk to be assessed by the developer and reside in the private sector.
2. The project must be environmentally sound.
3. The project must maximize regional and industrial benefits to Atlantic Canada.
4. There must be cost and time certainty.
5. The cost of the project to government must be no more than the avoidable cost of the ferry service it is meant to replace (approximately \$ 40.5 Million 1990).



A call for proposals was issued in March 1988, asking the consortia to address all these conditions in their submissions.

All the project parameters and the terms of the proposal call were widely publicized at the time. We wanted to ensure that the public clearly understood that the socio-economic and environmental impacts of the project which had been identified through our studies were fully integrated into the project requirements from the onset. These impacts would be fully addressed by the developer and the crown, breaking away from the traditional notion that such effects should be considered as impediments and dealt with as an afterthought once the project is underway.

As a result of the Proposal Call, six developers filed seven proposals: six bridges and one tunnel.

Only proposals which fully complied with all the terms of the proposal call would be acceptable and eventually proceed to the pricing stage.

In September 1988, as a result of the proposal evaluation process, three bridge proposals were retained as fully addressing the project requirements and one tunnel and three other bridges were rejected because they did not meet the criteria.

The successful developers were:

- Strait Crossing Incorporated,
- PEI Bridge Limited, and
- Borden Bridge Company Ltd.

## **7. FORMAL PROJECT REVIEW BY PANEL**

From the initial stages of the project, our approach involved serious consideration of the concerns expressed by the public as well as the development of mitigative measures to address the project impacts. By the time the proposals had been evaluated, we had determined that the environmental and socio-economic consequences of the project had been satisfactorily addressed and that soon we would be able to proceed to the next step of development, which is the financial and pricing stage.

Nevertheless, the lengthy process of public information and consultation revealed that there was still a fair degree of public concern among the population that our efforts had not been put to rest. Because of its perceived position as judge and jury, Public Works Canada could not successfully dispel the popular notions over the impacts of a fixed link. The government therefore decided to elevate the process to the highest level of public assessment which is the EARP Panel process.

In January 1989, the Minister of Public Works asked the Minister of the Environment for a formal public review of the project by panel. This mechanism is part of the Environmental Assessment Review Process and is always available if required. The Federal Environmental Assessment Review Office, under the authority of the Minister of the Environment, is an organism which is responsible for the coordination of panel reviews under the EARP.

Five prominent citizens of Prince Edward Island, New Brunswick and Nova Scotia were invited to adjudicate whether the concept of a bridge, as the only option which has satisfied all the requirements, was acceptable from the environmental and socio-economic perspective. In addition, they were to review the reasons for the rejection of other types of crossings. From then on, the process was no longer in the hands of Public Works.

As part of the Panel process, Public Works developed the Bridge Concept Assessment, which could be described as a statement of the impacts of a generic bridge in the Strait. The reason for the generic bridge concept is that the specific proposals were proprietary and their individual features could not be made public without jeopardizing the competitive process.

Following the publication of the Bridge Concept Assessment and its review, the Panel conducted a series of public scoping meetings in various communities on each side of the Strait. Over a dozen public meetings were organized by the EARP Panel to help them identify the specific concerns and focus on the issues. Upon the completion of the scoping sessions, the Panel requested some additional information from Public Works, which led to further research and analysis. This additional information was published as a Supplement to the Bridge Concept Assessment and allowed the Panel to decide that there was sufficient background information available that meaningful formal public hearings could be held.

In March of 1990, 21 formal sessions were held in the three Atlantic provinces concerned. This gave an opportunity to some 150 individuals and representatives of interest groups to express their opinions on the fixed link. Some sessions dealt with general and community concerns while others focused on more specific areas of impact, such as, the interaction between a bridge and the ice regime in the Strait, the effects on the socio-economic fabric, the influence of a link on the traditional Island way of life, etc. As the initiator of the project, Public Works' role consisted mainly of presenting our findings and answering questions related to our conclusions. The media coverage of the formal hearings enhanced the discussion and raised the level of awareness over the issues.

In August 1990, the FEARO Panel presented their report to the Ministers of Environment and Public Works. This report was published immediately. In essence, the FEARO Panel report constitutes the culmination of the public consultation process and represents the final compendium of recommendations to the government. In their report, the Panel concluded that the majority of the impacts which we had identified were valid and properly addressed. Nevertheless, on one specific account, which deals with the effect of a bridge on the ice regime, the Panel determined that such a structure could lead to unacceptable effects "on the marine biota, the fishery and coastal agricultural micro-climate". In the process, they also established the maximum level of impact which may be caused by an acceptable bridge and suggested how to deal with the unacceptable risks associated with a bridge concept. In their opinion, "risks associated with a maximum ice-out delay of two days over a period of 100 years would be acceptable".

After a thorough review of the Panel report, the government accepted the assessment of the Panel and decided that any bridge selected must not increase the ice season by any more than two days, any year, over a hundred years. This led to a major review of the ice issue and may impact on the engineering of the project. Independent ice experts have been





hired to review the ice model and make the changes required to improve its predictive capability, including those changes suggested by the Panel. They will also advise the government whether the three bridge proposals which are in the running meet the ice criterion established by the Panel. In order to preserve the integrity of the process, the government has requested that the ice experts publicly demonstrate how the revised ice model reacts against a variety of bridge features. To that effect, information sessions will be held on the Island which will demonstrate the reliability of the model as a dependable measuring tool of the interaction of the ice against bridge piers.

## **8. CONCLUSION**

Public involvement and open communications have been integral to the entire planning process, and if the project proceeds, public participation will continue throughout the life of the project. Should the government decide to proceed with this project and select a specific bridge proposal which meets the environmental and financial criteria, the agreement with the developer makes him responsible for publicizing the specific elements of that proposal along with his environmental management plan. This plan will be scrutinized by the public who will have the opportunity to influence its contents.

The public consultation process, as applied to the Northumberland Strait Crossing Project, is a very democratic process which provides the tax payers with an opportunity to receive all the necessary information about the project and to knowledgeably provide input into its development. Some significant conclusions can be drawn from our experience with public consultation. It provides an opportunity for constructive input by the public at large. It assists the sponsor in establishing the level of acceptable impact of a project, beyond the analysis of experts. This process also contributes to improving the quality of work done by these experts who may find that they must corroborate their conclusions by enhancing the quality of their documentation and producing further evidence to support their findings. Following close scrutiny by both experts and the public at large, it seems that a project of this significance could proceed with further assurance of conservatism in dealing with its impacts. Lastly, it is clear that the involvement of the public at the early stage of project planning and development gives the private industry and their financial backers a high degree of confidence that, once the decision is made to proceed to the implementation stage, the majority of the possible stumbling blocks have been resolved.