

CLC Meeting Minutes, January 16, 2018

Highway 101 Twinning – Three Mile Plains to Falmouth

West Hants Municipal Chambers – 6pm to 8pm

Attendees

Community Liaison Committee (CLC) Members:

Darren Porter	Shelley Bibby	Don Dignan	Liz Galbraith
Louis Coutinho	Dave Crouchman	Chris Mansky (for Sonja Wood)	
Brad Carrigan	Randy Hussey	Gail Tupper	Martin Laycock

Regrets: Sonja Wood, Andrew Sheehy, Jennifer Copage, Colin Hines

Nova Scotia Department of Transportation and Infrastructure Renewal (NSTIR): Mark Brace, Bob Pett, Justin Tanner, Jamie Chisholm

Nova Scotia Department of Agriculture (NSDA): Kevin Bekkers

Design Consultants (CBCL): Alexander Wilson, Rick Giffin, Bob Rutherford

Independent Chair: Ken Donnelly

West Hants Planning: Sarah Campbell

Minutes taken by: Shannon Lowe

1. Introductions

Members of the CLC introduced themselves.

2. Review Agenda

The agenda was approved without change.

3. Update on project – Mark Brace

The Federal government announced a funding contribution of \$34.5 million, which is matched by the Provincial government, for twinning of Highway 101 between Three Mile Plains and Falmouth (https://www.canada.ca/en/office-infrastructure/news/2018/01/investments_in_continuedtwinningofhighway101increasesafetyandeff.html). The funding does not include the aboiteau portion of the project. The Province intends to apply for additional funding for the aboiteau portion of the project at a later date when the design details are further developed.

Survey work is currently being done on the project. The project is broken into sections and will be officially starting in a few months with tree-clearing of the highway right-of-way. In response to a question from a CLC Member, Jamie Chisholm said that the tender has not been issued for the construction portion of the project yet.

4. Introduction of the design consultants – Justin Tanner

Justin Tanner introduced the design consultants who were hired in December. The design team is from CBCL Limited and is led by Rick Giffin, Project Manager. It is expected that the design process will take about a year.

5. Presentation by the design consultants

Rick Giffin of CBCL introduced members of his team that were present - Alex Wilson of CBCL (Environmental Lead and Hydrology Specialist) and Bob Rutherford of Thaumass Environmental Consultants Ltd (Fish Passage Specialist).

The consultants provided an overview of their team of consultants, which includes:

Organization	Responsibilities
Golder Associates	Geotechnical Investigation and Design, Dam Safety Analysis
Thaumass Environmental	Fish Passage
Scott Architecture+ Design Limited	Architectural Design
Acadia University	Fish Migration
Saint Mary's University	Sediments, Salt Marsh & Morphodynamics
J.M. Giffin Engineering	Structural - Sluice Gates
Dalhousie University	Turbulence Analysis
Particle Dynamics Lab	External Review

The consultants provided an overview of the project, which included the following requirements:

- Provide corridor over the Avon River for twinned Highway 101
- Ensure continuity of rail, trail and utility services
- Protect communities and agricultural land from the effects of sea level rise and climate change
- Improve fish passage
- Achieve all the above safely and cost effectively

The consultants then provided an outline of their work plan and ecosystem considerations, which included:

- Fish Presence and Fish Passage
- Protect Wetland Habitat and Shoreline Evolution
- Sediment Transport Locally and System-wide
- Flooding Risks and Control of Salt Water

The consultants have only just started their work and all aboiteau options are on the table – no decisions about options or any details are available at this time. For more information on the presentation, see Appendix A.

6. Question and answer

Shelley – There are a lot of species of fish, can you design something that will allow all species to pass through?

Bob – They hope to achieve that. They need to work on velocities that will work. It will be a challenge. Our goal is to meet all the goals of the design.

Shelley - Will there be flexibility to adjust the design with input from others?

Alexander – It's important that the team works with DFO and consult widely to make it a success.

Darren – Working on a gate that works in both directions. There is no traditional knowledge on the team. Bob, are you going to be the team member that is being used as the fish passage expert on the project?

Bob – Yes and we will talk to other experts as needed.

Darren – We need to ensure there is water flow. We have to address all-year fish passage. Have you had successful fish passage at the aboiteaus that you have worked on?

Alexander – LaPlanche River aboiteau (Amherst, Cumberland County) is a good example of one of the projects we have worked on where there is successful fish passage.

Chris – What are targets for improvement of the fish passage? Will they meet DFO standards?

Alexander – It's a requirement that they meet DFO standards.

Gail – Would the fish ladder be good for all species?

Alexander – No, perhaps we would have more than one ladder or other solutions for other species.

Rick – This would provide an artificial brook, fish being able to swim into the fresh water.

Darren – Certain species of fish are not going to like certain passages. A simple solution is to add some salt water in.

Rick – That is an option we are looking into.

Chris – Restoration of habitat is important for success. Allowing some salt into the system and allowing the fish to work it out in a natural way will be the best approach.

Darren – How much fish passage do we have with the current system?

Kevin - Fish passage is implemented in the spring once migration evidence appears, lake levels are lowered and gates opened to allow maximum passage. June gates are managed to control the lake level and gates are opened at the falling and rising tide. July to March, fish passage occurs during gate openings required to lower lake levels, primarily after rain events.

Darren – We have very little fish passage. When the gates are open the fish flow out. In winter there is no measurement of fish passage. If some salt comes in then the fish can come in. Otherwise they have a hard time.

Louis – Was there a budget set aside for the Aboiteau?

Kevin – The money that was just approved by the Federal Government was for everything outside the aboiteau. There is a separate budget to be developed for the aboiteau. It's all part of the same combined project though.

Ken – Is it fair to say that the funding was just for the highway project and the aboiteau is a separate project being done at the same time?

Mark – No, it is one project with two components. The funding announced is for the highway component. We will look to access other Federal funding pools for the aboiteau component.

Martin – Are there studies for the road construction and will they be public? The information gathered may be useful for the municipalities.

Justin – We will look into this.

Martin – Would any new gate be an improvement over what we have now?

Justin – We are required to meet certain standards.

Kevin – We have improved fish passage from years ago. Have to come up with a solution to build a new gate as it is at the end of its 50-year life expectancy.

Shelley – Is the goal to keep water levels the same as what they are now in Lake Pesaquid?

Alexander – It's going to be a consideration. Temporary changes could be made.

Shelley – Studies indicate that LED lighting has affected wildlife. Is this something that's being considered?

Alexander – We recognize this and will be looking at it.

Justin – I can't comment on its impact but some lighting would be required around interchanges for highway safety.

Donnie – Was the Department of Agriculture going to replace the Aboiteau?

Kevin – It was classed as a tired old structure. It was on their list to look at.

Dave – Have you looked into what would happen if flooding took place?

Don – If the dam failed, the dykes could affect flooding. If one of the dams failed we would have flooding.

Kevin – You have to consider dam failures upstream and downstream.

Alexander – It's not a question of capacity, there is no room for the water to go. When it encounters high tides the water will not be able to get out.

Ken – EMO has done modelling studies, are they available to the consultants?

Don – Yes they are.

CBCL - We have some of that information as we did one of the modelling projects.

Brad – What about recreation, tourism and money that has been spent on the waterfront thus far?

Jamie - CBCL was hired for the technical side of this project and the Provincial Government would need to step in for any other matters relating to the project.

Brad – Can you share how much sediment has been in the basin since 1965? We have noticed the water level is down.

Darren – There is increasing sediment in the lake. In the last 5yrs, I can't drive my boat in some parts of the lake anymore.

Alexander – We have been looking for information on sediment levels in the lake.

Kevin – There was a protocol set up for what water levels were supposed to be. I agree that there is an issue with the levels.

Randy – Can we design the fish passage with an ability for the public to see the fish pass through?

Alexander – This is something we could look into.

7. Other business

Darren Porter presented an idea he had on an alternative to free passage of fish. He said saltwater intrusion could be catastrophic, but realistic passage would require some saltwater inclusion. He suggested that Archimedes' screws could be used for fish passage and could include a generator that would capture power from the flow of water as it rose to a specified level.

Darren pointed out that it could be set up in a way that people could watch the fish while they are going through the screw. This could provide an economic benefit for the town while generating power. He also told of a fellow who was looking to use this technology for power generation, and that he was looking to set up local manufacturing capabilities. He said he felt it was an idea generated by thinking outside of the box, and it could be investigated.

8. Next Meeting

The consulting team is working to have concepts in June or July. It was suggested that the next meeting might be in April or May.

Meeting adjourned at 7:45pm

Appendix A - Presentation Slide Deck