

June 29, 2018

Dale Thompson,  
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Prince Edward Island  
Canada C1A 7N8

cc: Greg B. Wilson, Manager  
Environmental Land Management  
Environment Division  
PEI Department of Communities, Land and Environment  
Charlottetown, Prince Edward Island  
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CONTACT  
Rob LeBlanc  
president  
t 902 461 2525

**Re: GWBI provincial Technical Review Committee Response to June 12 - June 25, 2018 Questions**

Dear Dale;

Thanks for taking the time to review the master plan. This letter should address your questions from June 12 through to June 25, but if there's any questions remaining, please feel free to drop me a line and we'll get right back to you.

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Landscape Architecture

Planning

Architecture

Civil/Transportation Engineering

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**1. PLEASE PROVIDE DETAILS ON HOW THE PROPOSED MONASTERY FACILITIES WILL BE HEATED;**

The heating system will likely be propane or # 2 heating oil. However, GWBI does not want to exclude the possibilities of using air to air heat pump, biomass fuel or other sustainable heat sources as well.

**2. PLEASE PROVIDE DETAILS ON THE LEVEL OF WASTEWATER TREATMENT AND AN ESTIMATE OF THE NITROGEN LOADING ANTICIPATED FOR LOCAL GROUNDWATER AND FOR THE BRUDENELL/MONTAGUE RIVER ESTUARIES. PLEASE ALSO PROVIDE AN ESTIMATE OF THE EXPECTED IMPACT OF THE FACILITY ON BACTERIAL LEVELS IN THE BRUDENELL/MONTAGUE RIVER ESTUARIES;**

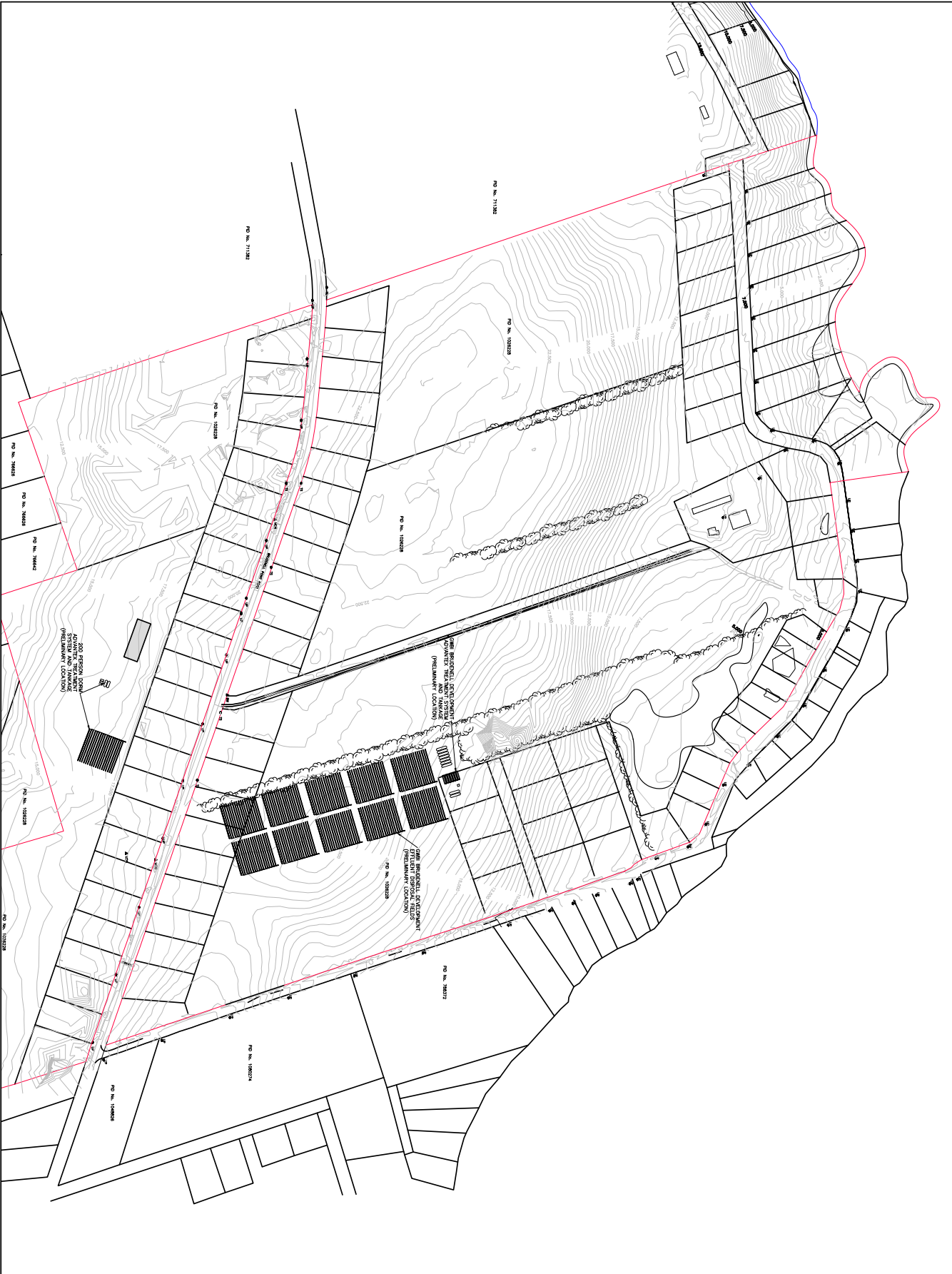
SCL Engineering provided a full engineering design brief For a Domestic Effluent Treatment System for South Lotus Hall on June 14 which I assume you received a copy of (we have attached a copy in case). This report provides many of the details you are asking for and this same system is proposed for the eventual northern campus. The north campus disposal fields are located at least 400m from the Brudenell River and these fields are located fully in the Brudenell River watershed. The south Lotus Hall fields are located in the Montague River watershed at least 1.3km away from the nearest shoreline.

**3. PLEASE CONFIRM THE AREA OF LAND REQUIRED ( ACRES OR HECTARES) FOR THE IN-GROUND WASTEWATER TREATMENT SYSTEM;**

We have currently set aside 10 acres on the north campus, the south side has a field reserve of 2,500 sq.m. I have attached a preliminary concept from the engineers that we used in our master plan document that should provide some more detail. See next page.

**4. PLEASE NOTE THAT ANY WELL(S) SHOULD BE LOCATED A MINIMUM OF 300 METRES FROM THE SHORELINE TO AVOID POTENTIAL ISSUES WITH SALT WATER INTRUSION;**

Noted and shown on the map below on the following page. We expect the wells will be somewhere near the top of the hill north of Highway 319 and as far away from the septic fields as possible (over 300-600m).



Scale: 1" = 100'

No.	Description	Date
1	PRELIMINARY	03/07/18
2		
3		

Drawn By: H. E. V. T. S.

**SEA Engineering (2005) Inc.**  
 CONSULTING ENGINEERS & ARCHITECTS  
 14 Bond Street, Ladbroke Grove  
 London, W2 1BN, UK  
 Tel: (020) 426 8800 Fax: (020) 426 4000

Project No: 218010 Date: MARCH, 2018  
 Client: SWBI BRUDENELL DEVELOPMENT  
 Location: BRUDENELL, FEL  
 Drawing Title: PRELIMINARY OVERALL SANITARY TREATMENT PLAN

This drawing is the property of SEA Engineering Inc. and shall not be used for any other project without the written consent of SEA Engineering Inc. or as show designs, except as written from the Engineer.  
 Sheet No. 5 of 5

**5. PLEASE PROVIDE DETAILS ON HOW THE PROPOSED FACILITY WILL AFFECT GROWTH OF BUSINESSES IN THE AREA;**

The development will have significant benefits to local business both during and after construction. The socio-economic impacts will be felt right across PEI. The master plan did not include an economic impact assessment as part of the scope, but a short overview summary is provided below for your information.

During construction, it is the intention of GWBI to use local Island services and products as much as possible to help grow the island economy. The eventual build-out of the full master plan could be up to 650,000 sq.ft. of new building areas so even at a modest sq.ft. cost of \$160 - \$250/sq.ft. (2018 \$), this could be up to a \$104 - \$162m architectural construction project (plus FFE, plus land development costs) for island companies and up to 6-8% for design services (\$6-13 m). Overall this could be a \$110-185 m build after construction, design and FFE. Services will include local design and engineering, local project management, local contractors and construction firms, etc. There will be some design from Asia working with local designers, and there will be some parts of the development that will come from Asia where not available in Canada or on PEI such as furnishings and finishes or specialty items (like the Chinese Dougongs and other specialty architecture).

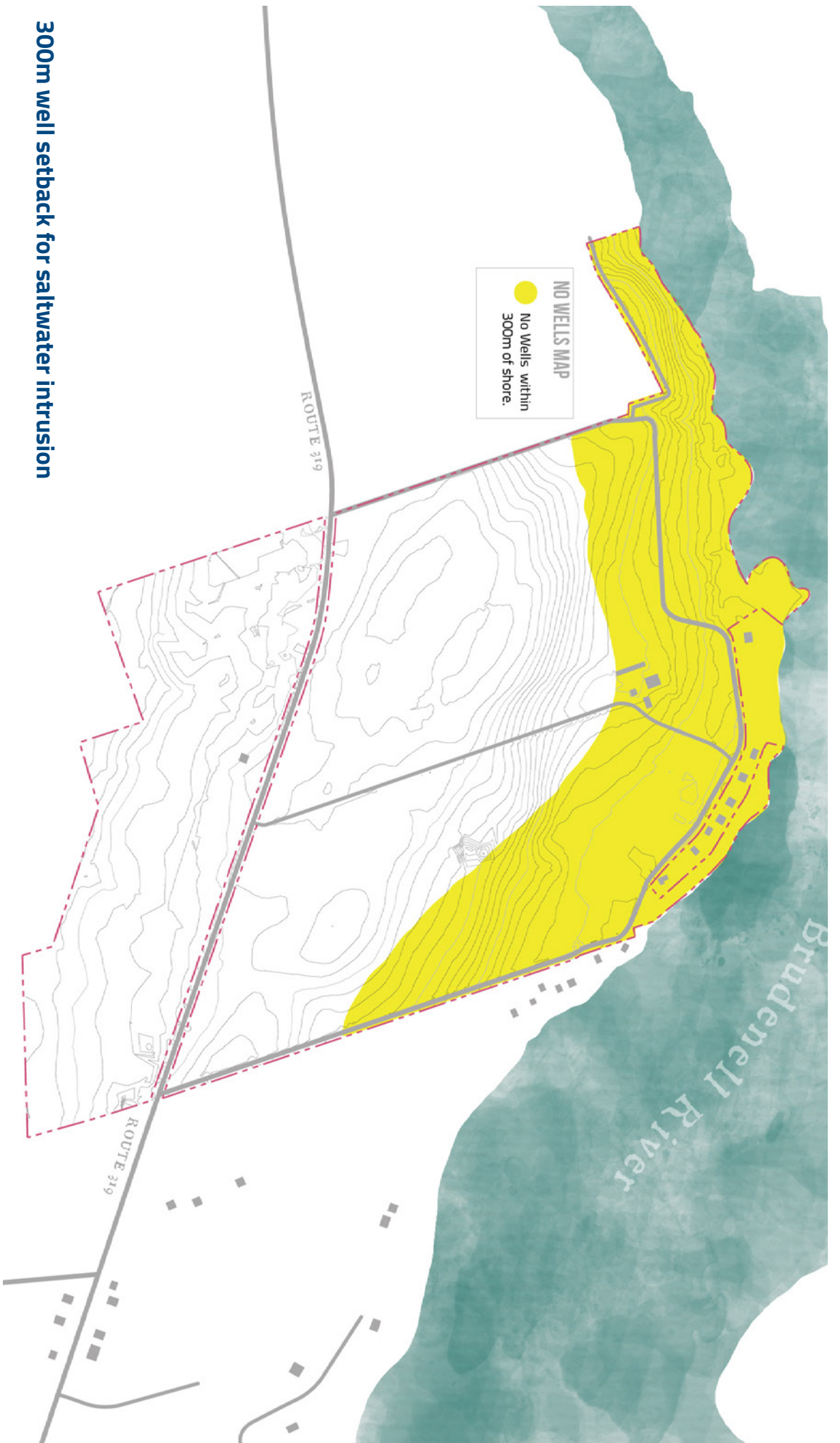
The spending impacts will of course be many times construction value. As an example, Ekistics is currently working on the relocation of the Marconi Campus (250, sq.ft.) to a downtown location in Sydney, NS and for a \$100 million build (excluding FFE and excluding site costs), the following table shows how the economic benefits will be spread across the country. Comparatively, we could assume a roughly a 1-2 x multiplier for the GWBI project compared to the NSCC campus over its full build-out lifetime depending on what the final cost is. This comparison shows how the entire country, the province, and the region could benefit from a project like this. Notably, the benefits extend right across the region and across Canada with significantly more spin-off than the original construction benefits of the original build cost.

Following construction, there will be significant spin-offs from tourists visiting the monastery and from the nuns themselves who will need products and services as part of daily life. Needless to say, this project will have significant long-term benefits for the local business, regional economy, and provincial economy.

**Table 1: Economic Impacts of a \$99 m new NSCC Campus in downtown Sydney (2018 \$).**

Construction Impacts of Downtown Sydney Marconi Campus (1,530 Students) (\$million 2018\$)													\$ 99.27 million direct impact		
Region	Shipments			GDP @ Market Prices			Household Income*			Taxes			Jobs		
	Direct Shipments	Indirect + Induced Shipments	Total Shipments	Direct GDP	Indirect + Induced GDP	Total GDP	Direct Household Income	Indirect + Induced Household Income	Total Household Income	Income Taxes	Consumption + Property Related Taxes	Local Consumption + Property Related Taxes	Direct Jobs	Indirect + Induced Jobs	Total Jobs
Canada	\$99.27	\$176.80	\$276.07	\$27.91	\$79.77	\$107.68	\$27.73	\$39.79	\$67.52	\$17.97	\$8.75	\$3.13	509	880	1,389
Federal Government										\$11.28	\$3.30				
Cape Breton Island	\$ 99.27	\$ 29.96	\$ 129.23	\$27.91	\$15.64	\$43.54	\$27.73	\$7.69	\$35.42	\$2.83	\$2.41	\$1.23	509	182	691
Rest of Nova Scotia	\$ -	\$ 57.13	\$ 57.13	\$ -	\$29.82	\$29.82	\$ -	\$14.67	\$14.67	\$1.94	\$1.65	\$0.84	-	347	347
Rest of Atlantic Canada	\$ -	\$ 11.74	\$11.74	\$ -	\$4.52	\$4.52	\$ -	\$2.12	\$2.12	\$0.25	\$0.28	\$0.07	-	54	54
Rest of Canada	\$ -	\$ 77.98	\$77.98	\$ -	\$29.80	\$29.80	\$ -	\$15.32	\$15.32	\$1.68	\$1.11	\$1.00	-	297	297

\* Includes Wages & Salaries, Supplementary Labour Income and Income from Unincorporated Enterprises (i.e. Mixed Income)  
Source: *Jozsa Management & Economics*



**300m well setback for saltwater intrusion**

**6. PLEASE PROVIDE DETAILS ON HOW THE PROPOSED FACILITY WILL IMPACT UPON LOCAL RESIDENCES AND HOW THE POTENTIAL IMPACT OF THE FACILITY WILL BE MINIMIZED.**

There will be construction impacts and post-construction operational impacts. Construction impacts will include construction of the various phases over the 10-15 year lifespan of the plan.

Some of the ways GWBI will minimize construction impacts include:

1. The siting of the main monastery is located away from (over 300m) from existing residences on the river. The shelterbelt that separates the new buildings from the residences will be preserved and expanded to ensure noise and dust from the project is minimized.
2. A more detailed stormwater management plan will be prepared for the overall development prior to construction of the north campus to minimize any water quality or quantity impacts on the Brudenell River. The intent will be to maintain the pre and post development hydrology.
3. Erosion Control measures will be built into the stormwater management strategy as part of the site development and grading plans for each site. While PEI does not currently have an erosion control standard for construction, we will be employing erosion control standards developed by local engineering professionals to ensure sediment stays onsite and is not transported to nearby rivers. The minimal amount of soil will be disturbed for each phase of the development.
4. Dust control measures will be integrated into the specifications for the tender documents for each phase of the development to minimize impacts from dust. We will follow provincial dust control standards to minimize dust impacts.
5. Noise control is the domain of the municipal government and will likely be part of the development permits for each phase of the development. Municipalities have the right to control the start and completion times of construction which could create noise nuisances. We would expect a construction window of 7am-8pm but this remains to be worked out with the municipality.
6. Environmental controls will be part of the specifications for construction and will likely include tree preservation areas which will be fenced with construction fencing to preserve tree species like some of the hedgerows. The spec will likely also include requirements for a detailed stormwater management plan for construction and things like refueling requirements at specified distances from watercourses and wetlands. Ekistics has been active on many of Parks Canada's largest projects in Atlantic Canada we typically use the most rigorous construction specifications for preserving ecological integrity. GWBI will have even more stringent requirements for the environment (like not harming earthworms) which will extend above even the most stringent standards.
7. The issue of mosquito control has come up at several meetings. While GWBI would not condone a mosquito spraying program on their lands, they will not prevent anyone from using regulated pest controls on other people's lands outside of the monastery. Instead, of spraying, GWBI will employ stringent stormwater design practices to minimize breeding populations for nuisance species like mosquitos. For instance, stormwater ponds can be designed with fluctuating water levels to discourage breeding. These passive design approaches are much favoured on GWBI lands than active eradication programs.
8. Traffic control during construction will also be part of the construction specifications on an as-needed basis. This could include traffic control near the site at 319, but it could also involve some road cleaning, and intersection management at peak construction times at the Highway 4 intersection if needed.
9. A forest replanting strategy has already started on the monastery lands and will continue well into the future to minimize visual impacts and to maximize microclimate and biodiversity objectives.

After construction, it is intended that the Monastery would be open to the public at certain hours of the day and for most of the year.

1. Though traffic control is not expected to be an issue, there may be times when special events would have more traffic. During these times, traffic control officers may need to be hired for special events.



2. The parking lots has been strategically sites with an entrance road to maximize the distance from residents. The entry uses the existing Old Farm Road, which is 550 m from residents on Delodder Road. The master plan shows limited access off of the 319.
3. GWBI has and will continue to work with the Roma Historic site to host events and maintain this important historic facility for Islanders.
4. GWBI will continue its charitable works in the community from Island clean up days, to working with seniors, to making bread for the under-privileged.
5. GWBI will continue to work with local farmers on the organic harvesting of GWBI lands agricultural lands.
6. GWBI will continue to consult with the surrounding land owners on Delodder Road on specific concerns and issues as they might arise.

**7. PLEASE EXPLAIN HOW THE PRIVACY OF THE RESIDENTS OF DELODDER ROAD WILL BE MAINTAINED WITH THE PROPOSED PUBLIC WALKWAY TO BE CONSTRUCTED ADJACENT TO THE HOUSES ON THE ROAD. IF NECESSARY, CAN THIS WALKWAY BE RELOCATED AT A GREATER DISTANCE FROM THE HOUSES ON DELODDER ROAD?**

Yes, we can relocate this walkway a greater distance from Delodder Road.

**8. THE EIA APPEARS TO BE INCOMPLETE AS TO THE SCOPE AND FOOTPRINT OF THE DEVELOPMENT. IT HAS BEEN PRESENTED AS A STAND ALONE PROJECT WITHOUT CONSIDERING ADJACENT RELATED PROJECTS OR RESIDENCES.**

**A. I refer to the large subdivision to the east of the proposed monastery. How does this interact with the proposed development?**

There are two subdivisions to the East of the proposed Monastery, Three Rivers Landing and Brudenell Commons. Neither are owned by GWBI. GWBI has engaged its neighbours throughout the EIA process to ensure any concerns are identified and dealt with prior to construction.

**B. A substantial numbers of properties have been acquired on Robertson Road directly or by related parties. How do these blocks of land fit into the development?**

There are no properties on Robertson Road owned by GWBI.

Immigration in PEI is the responsibility of both the province and federal government, and as we mention in the report, PEI has set an ambitious target of 160,000 people by the end of 2022 (an additional 10,000 residents). The Buddhist families coming to PEI are an asset to the rural communities of PEI and will help the Province meet its ambitious immigration targets.

Several Buddhist families have purchased homes in Brudenell as well as other areas of Eastern PEI to be closer to their family members who are students at GWBI. Several of these families are now Island residents who have children who are attending the Montague family of schools, paying taxes and shopping in the local community. Several Buddhist families have bought building lots in subdivisions to the East of the proposed development with plans to eventually move here once immigration processes are completed. Some are parents and some are parishioners.

Again, this EIA is focused on the proposed monastery development, not the speculated development spin-offs associated with this land use. We fully anticipate that this development will create significant tourism and job opportunities for many island businesses, yet the EIA does not speculate on the environmental impacts associated with the growth of other Island businesses; nor should it speculate on where or how many new Asian families may come to live on PEI as a result of the Monastery.

To be clear, GWBI is not acting as a broker or land speculator for the parents of its students or for parishioners.

**C. Vacant land (previous agricultural use) on Robertson Rd has been purchased with the explanation of providing a building site for the home of family members visiting nuns at the monastery. How many visiting homes will be constructed to provide for the families of 1500 nuns and why are they not included in the assessment?**

There is no vacant or agricultural land on Robertson Road owned by GWBI and no homes being developed by GWBI. The monastery is planning for the possibility of 1400 nuns not 1500. GWBI cannot speculate how the monastery will impact future development patterns in rural PEI following its construction. The EIA deals with the issues that are under the direct responsibility and control of GWBI on the lands owned by GWBI. We firmly believe that immigration and multiculturalism is a positive benefit to rural communities.

**9. THE TRAFFIC ASSESSMENT SECTION OF THE EIA STATES IN THE CONCLUSION THAT : “ UNDER TODAY’S EXISTING CONDITIONS, IT APPEARS PRUDENT TO CONSIDER THE ADDITION OF A LEFT TURN LANE FOR SOUTHBOUND HIGHWAY 4 TRAFFIC AND POTENTIALLY AN ADDITIONAL EXIT LANE ON ROBERTSON ROAD TO ACCOMMODATE RIGHT AND LEFT TURN VEHICLES SEPARATELY.” THIS STATEMENT DOES NOT CONSIDER THE REQUIREMENT FOR SUCH WITH INCREASED TRAFFIC AS INDICATED IN THE REPORT OR FROM INCREASED TRAFFIC FROM ADDITIONAL FAMILIES OR RELATED DEVELOPMENTS ON ROBERTSON AND BRUDENELL ROADS.**

The report clearly notes that under existing traffic conditions today, the Province should consider an exit lane and left turn lane. This is without the monastery. With the monastery, the intersection will still need the same improvements that are needed today.

**10. PLEASE PROVIDE ADDITIONAL DETAILS ON THE WASTEWATER TREATMENT SYSTEM PROPOSED FOR THE NORTH CAMPUS, INCLUDING THE FOLLOWING INFORMATION:**

**A. Avg flow (Qa), Peak flow (Qp)**

Estimated Flows based on 1400 people

Estimated Avg. Flow = 42,000 usgpd

Estimated Peak Flow = 56,700 usgpd

**B. Predicted Influent Quality**

cBOD, TSS, TKN, FOG

**C. Estimated for Influent Quality to Advantex System from Primary Tankage**

Estimated CBOD = 200 mg/l average

Estimated TSS = 40 mg/l average

Estimated TKN = 65mg/l average

Estimated FOG = 20 mg/l average

**D. Effluent Predicted from WWTP**

cBOD, TSS, TN, TP, faecal

CBOD = <30 mg/l

TSS = < 30 mg/l

FC (faecal) = < 1x10<sup>-4</sup> mpn/100ml

TN = <30 mg/l

TP = < 12 mg/l

**E. predicted reduction in the Disposal Field of parameters in effluent**

CBOD (Carbonaceous Biochemical Oxygen Demand) = > 90%

TSS (Total Suspended Solids) = > 90%

FC (Faecal Coliform) = > 99.9%

TN (Total Nitrogen) = 10 to 20%

TP (Total Phosphorous) = 25 to 90%

**F. Predicted loads of TN and bacteria leaving the disposal field to the Brudenell River.**

According to the data provided above, there is no concern for the NT and bacteria loads leaving the disposal field to the Brudenell River.

**G. general calculations showing the disposal fields sizing. We do not need the engineering detail at this time but do need confidence there is sufficient land set aside.**

Size of disposal field area shown based on a preliminary loading rate of 0.41 usgpd/ft<sup>2</sup>.

**H. has there been a site suitability assessment completed to demonstrate this area will work for a large disposal field??**

Preliminary testpits have indicated the area proposed for disposal fields would be classified as a mixture of Category 2 and Category 1.

**I. has there been land set aside for backup disposal area in case needed in the future?**

There is sufficient area for a backup disposal field in the proposed agricultural area if the need should arise for a backup field.

All around, this is the best possible large scale development for PEI that is consistent with its growth goals, environmental conservation goals, and community development goals. We firmly believe that this development will provide maximum socioeconomic benefits with the least environmental impacts (in fact, we also firmly believe that the ecological function of the lands will be improved by this project).

If you have any additional questions please feel free to contact me at your convenience if you have any specific concerns.

Sincerely,



Rob LeBlanc

President, Ekistics Plan + Design