### APPENDIX I PUBLIC CONSULTATION

#### MLS: Open House Canso, Nova Scotia January 31, 2017

#### **Prepared by: NATIONAL Public Relations**

#### Overview

On January 31, 2017, MLS hosted an Open House in Canso, Nova Scotia to share information with community members regarding MLS's proposed commercial spaceport venture. Despite only one round of advertising in the weekly Guysborough Journal, attendance was very high with approximately 140 individuals in attendance.

The format of the community open house allowed residents to wonder around the hall to read about the project, view imagery, and ask the MLS team direct questions. The advantage of this format allows community members to come and go as they desire, as well as the ability to facilitate conversation in response to personalized questions.

#### **Feedback from Residents**

#### Questions / Discussions with Residents

Overall, the feedback from conversation among community members was positive, friendly and highlighted a high level of interest and intrigue. Questions to the MLS team included:

- Who will have fire mitigation responsibility with many people coming and going from town? (3-4 community fire chiefs attended session)
- Does Canso have the appropriate infrastructure to deal with influx of visitors/residents?
- What government funding are you waiting on?
- Why Canso? What is the geographical advantage of this community?
- How many jobs will it create? In what sectors?
- Is this really going to happen? What are the obstacles?
- What is the next step in the process?
- Where else are you considering for a location?
- How are you funding this?
- Do you have the required regulatory approvals to proceed with this project?
- How will this project impact the environment? How will you monitor environmental impacts?
- Where will the equipment or infrastructure come from?
- Where will you get liquid oxygen? Is that safe?
- What is the impact on our inshore fishery?
- What will happen to the private camps located on the launch site property?
- When will you decide if you will proceed with Canso?
- These questions (and proposed responses) should be added to MLS's communications tool kit specifically the Q&A section.

There were also select comments regarding the level of technical detail within the project description and the conversations happening at the display boards. Some community members found it a challenge to understand.

There was one aggressive detractor at the event who was clearly opposed to the project and challenged members of the MLS team. This individual asked many questions around the C4 rocket, compared this proposal to an unsuccessful operation in Brazil, and shared concern regarding the fact that MLS was formed immediately after the U.S. election. This individual, although aggressive, did not gain any support for her position from other community members in attendance.

#### **Exit Surveys**

Of the exit surveys that were collected, the majority of feedback was positive. We did not receive any negative or oppositional comments to the project itself, but a few did reflect cynicism around whether the project would actually happen in Canso (comments suggested government interference, change in location, etc). The community is very aware that the aging population (a common NS problem, but magnified in this small county) is a major challenge and they recognize the dire need to create good, sustainable jobs that will retain youth and bring people home from rotation work out west. While the project stated the need for high tech employment, a number of attendees asked if less technical jobs / blue collar jobs will be available to community members as well.

Other feedback reflected on the format of the session. Some residents would have preferred a formal presentation by the MLS team. On the recommendation of NATIONAL, MLS did not proceed with a formal presentation as it would have provided a stage for oppositional comments to control the discussion and leave limited space for others to ask questions or share information.

#### **Opportunities and Next Steps**

- 1. Continued engagement with the community
  - There is a real interest in the viability of this project and much intrigue surrounding the "why" for Canso. MLS may want to consider capitalizing on this interest and moving this interest to active support through consistent engagement with community members. The MLS team has since reached out to the stakeholders it had met with while in town, but it is recommended that a note of thanks be shared with open house attendees to let them know MLS is very much engaged and interested in staying in touch with the community.
  - Next Steps: Work with NATIONAL to develop a small communique to residents that thanks them for their attendance, reminds them of the project proposal and highlights the "why" for Canso.
  - MLS should consider refining the communications toolkit to ensure language is less technical. As it was observed at the open house, many members struggled with the detailed technicalities of the project. It should also highlight all of the possible jobs available and highlight blue collar opportunities (during and post construction phase).
  - Consideration of a web property the development of a microsite that houses information about the project and how to get in touch with the team with questions.

- 2. Continued Government Relations / Key Stakeholder Engagement
  - It is clear that government stakeholders are keen to support MLS in the successful outcome of the project. As the project moves forward NATIONAL recommends MLS continue to provide updates on conversations (with community members, organizations and other levels of government) as the project advances
  - Next Steps: Steve to continue organic engagement and outreach with decision makers and key influencers as the project advances
- 3. Continued Engagement with Fisheries Association
  - During the meeting with the Fisheries Association, it was clear that Ginny and Eugene
    were interested in receiving as much information as possible regarding the project, to
    ensure they could better inform the members of the association. The large attendance
    at the community open house was due in part from the association's Facebook
    advertisement of the event. Therefore, it is important that the Fisheries Association is
    provided helpful information about the project, and MLS may wish to offer to brief the
    entire association in the near future.
  - <u>Next steps:</u> Reach out to Ginny at the Fisheries Association to gather any questions she may have received after the open house.
  - Offer a project briefing to all members of the Fisheries Association.

#### 4. Educational Partnerships

- MLS had very successful conversations with many post-secondary institutions while in Nova Scotia including Saint Francis Xavier University, Dalhousie University, and the Nova Scotia Community College. MLS may want to consider opportunities to contribute to curriculum, research or offer employment partnerships for students. MLS could also consider visiting local high schools within Guysborough County to provide information about the project and what the recommended path of post-secondary education is necessary for a career in aerospace.
- <u>Next Steps:</u> MLS to continue engagement with post-secondary institutions and facilitate
  a partnership in curriculum development or in offering training and employment
  opportunities for students interested in pursuing a career in the aerospace sector.



## MEET OUR TEAM







## Welcome

- The open house will run from 2:00pm to 6:00pm.
- Experts are stationed at the posters throughout the room and are available to answer your questions.

# Facts

- Located near Little Dover, Hazel Hill, and Canso, Nova Scotia.
- Access to the land is expected to coincide, in part, with the access road to Sable Wind Farm, owned and operated by MODG, in partnership with Nova Scotia Power Inc.





## Development Timeline

Activity / Timeline	2016	2017	2018		2020	2022
Canso Site Down Selected	November					
Canso Site Selection Finalized	March					
Environmental Assessment Approval		N	larch			
Site Design Start		October				
Ground Breaking / Construction Stage			April			
Site Commissioning				January		
First Launch					July	
Launch Season						8 Launches



Maritime Launch Services Ltd. (MLS) was formed in Nova Scotia, Canada in October 2016 with the intention of bringing together the necessary skills, assets, launch vehicle technology, and infrastructure to serve the growing commercial space needs for satellites. MLS will leverage from the highly reliable and proven launch vehicles manufactured by Yuzhnoye SDO in Ukraine to bring their latest model Cyclone 4M to the North American market. The Cyclone 4M occupies an underserved market segment which offers the most efficient lift capacity to address developing launch industry requirements.



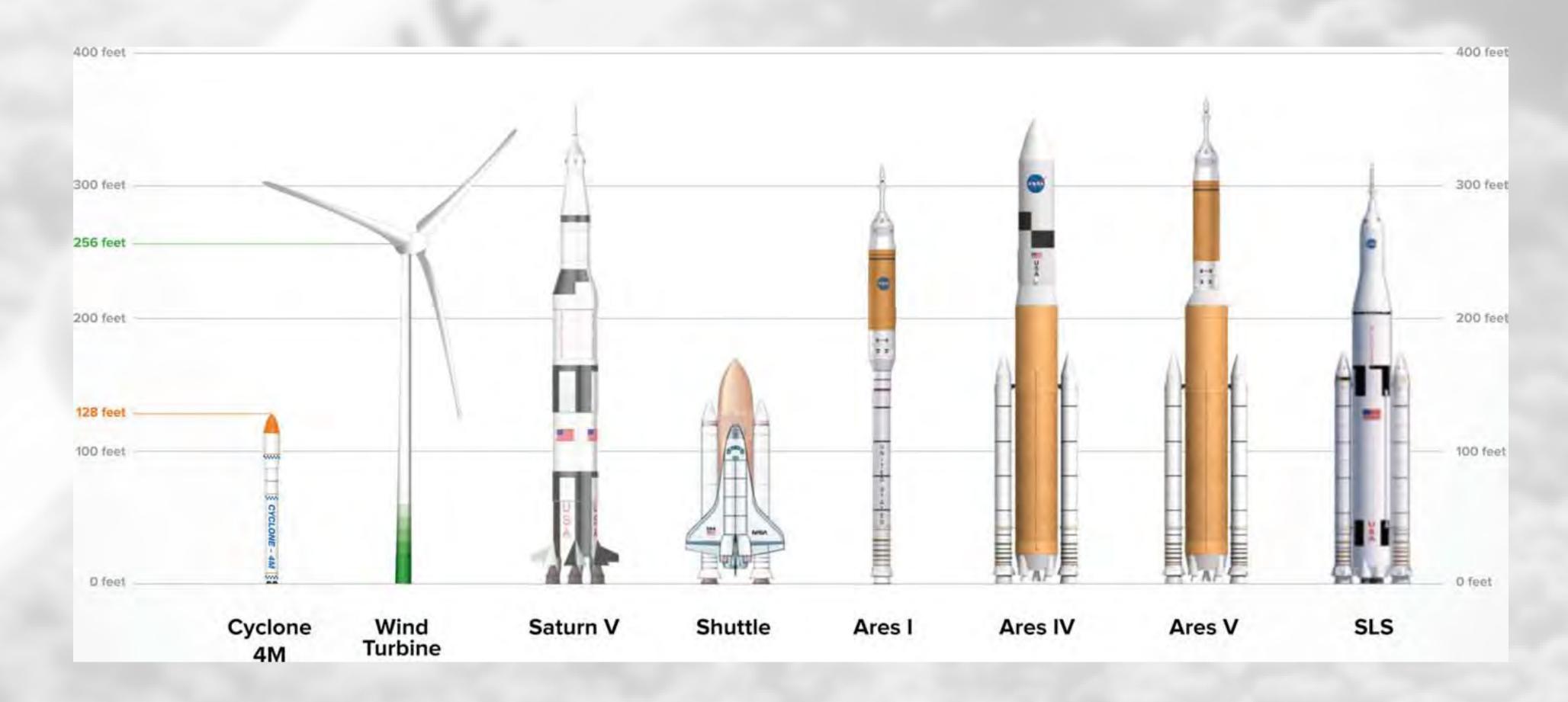
When could construction begin?

Construction could start Mid 2018 with the first launch in 2020.

### The Technology

MLS Will be launching the Cyclone M4.

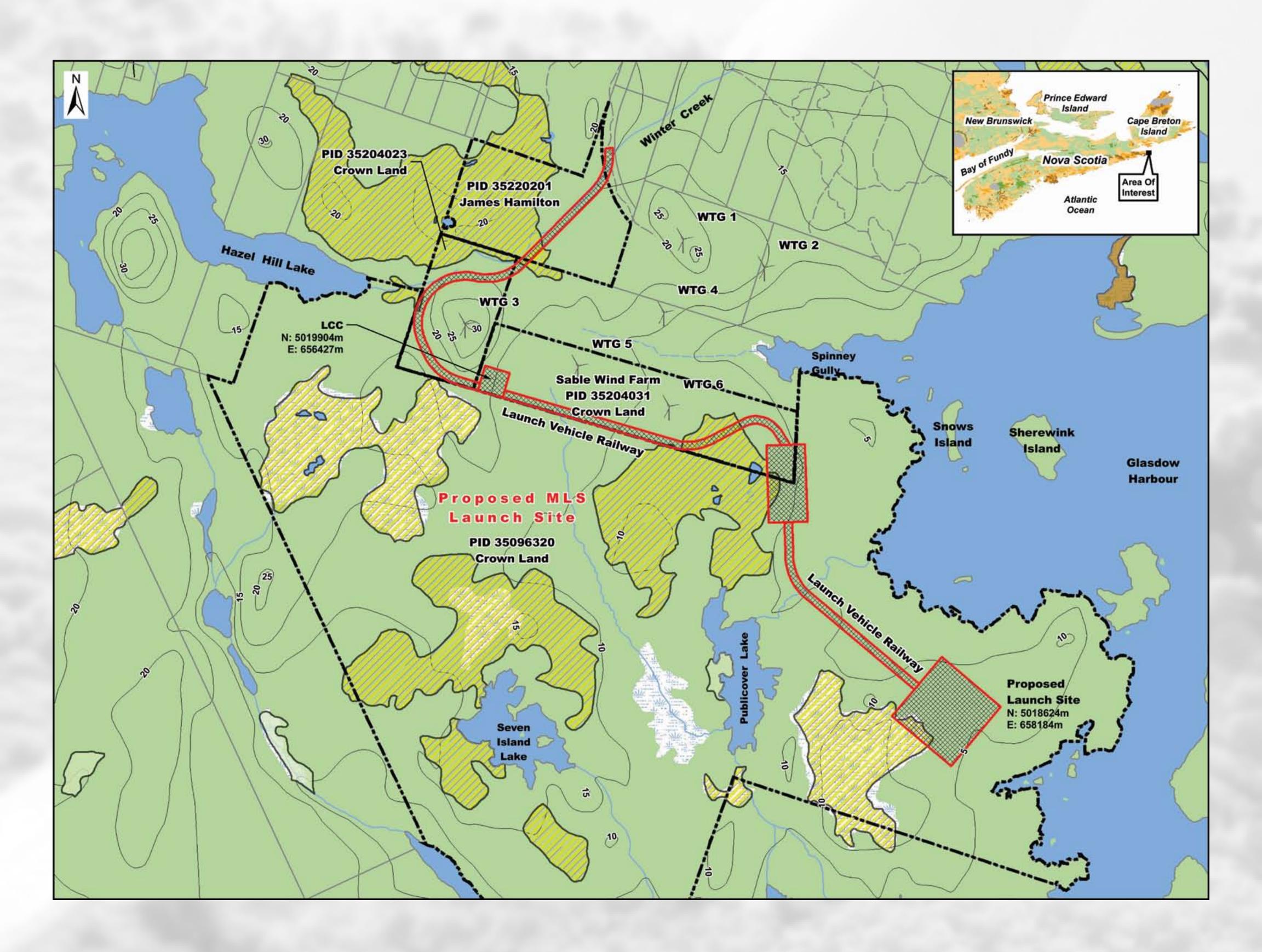
Cyclone M4 is a medium class rocket with a payload capacity of up to 5,000kg to Low Earth Orbit (LEO).





Where will the project be located?

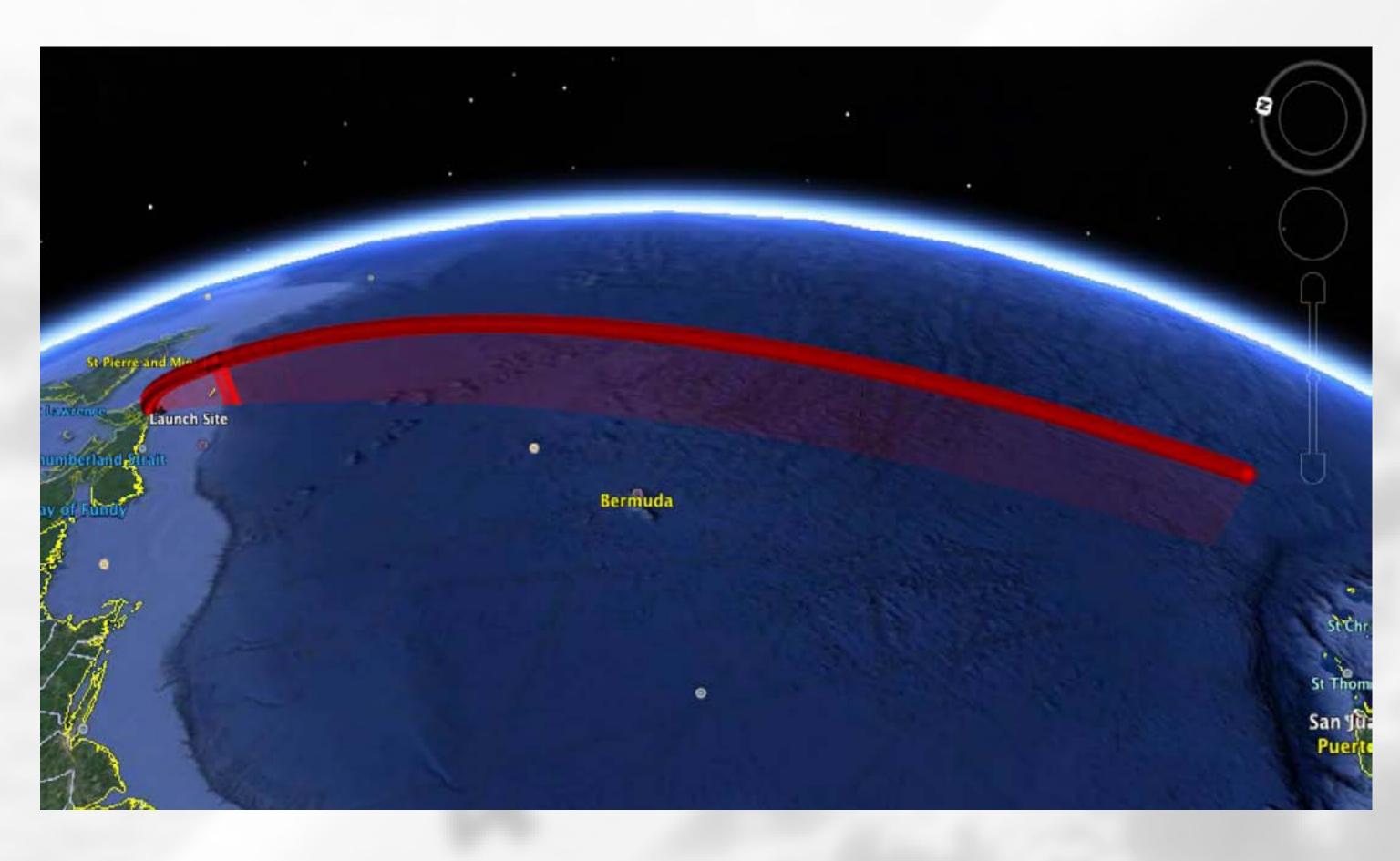
The proposed launch site will be located near the town of Canso, within the Municipality of the District of Guysborough, N.S. Access to the land is expected to coincide, in part, with the access road to the Sable Wind Farm, owned and operated by the MODG, in partnership with Nova Scotia Power.

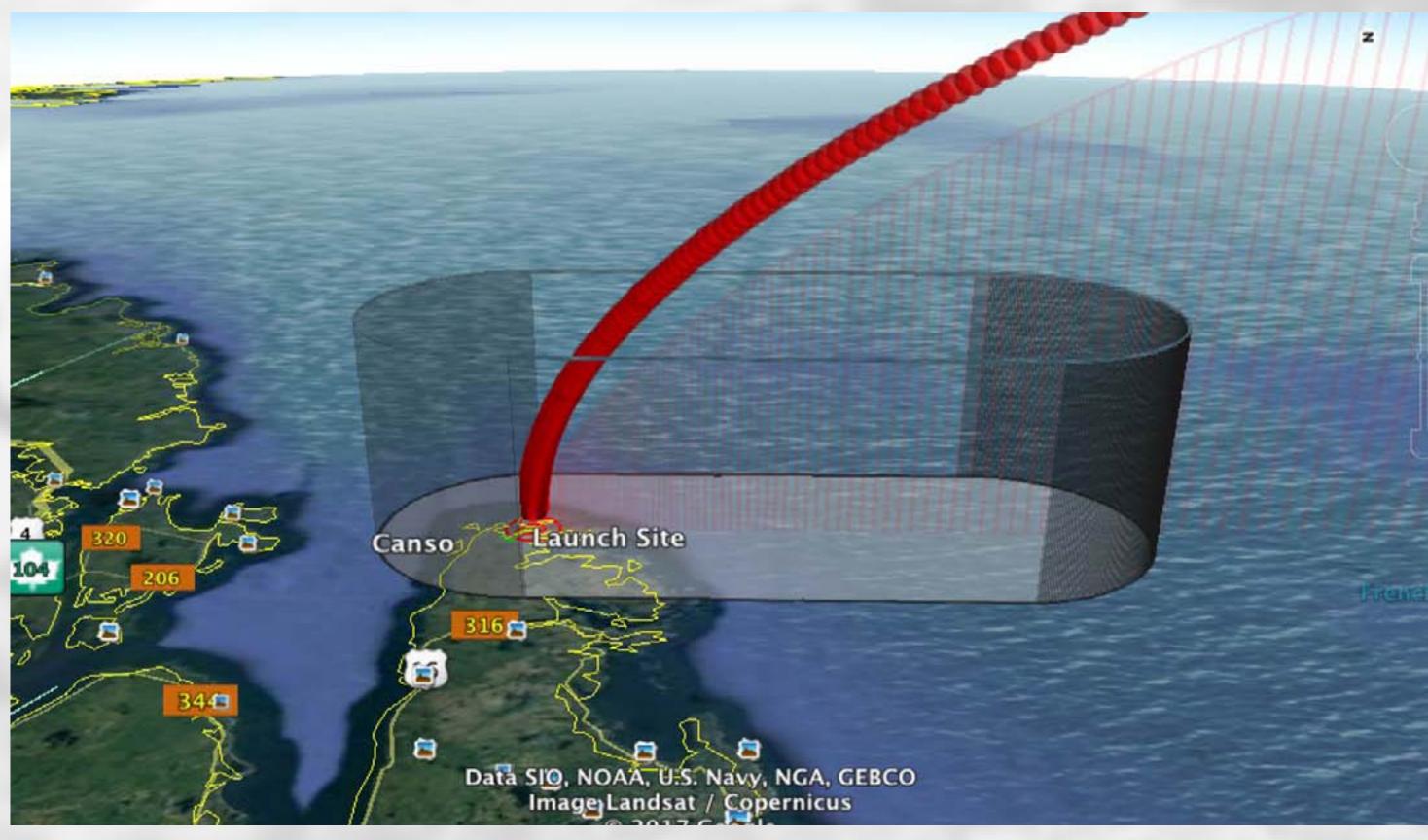




## Rocket Launch Pathways

The majority of launches would be conducted between the hours of 7:00 a.m. and 12:00 p.m. MLS would conduct all launches, including pre-flight activities, and all launches would be coordinated with Transport Canada and NavCanada. The C4M launch trajectory would be specific to each particular mission. However, all launches would be conducted to the south over the Atlantic Ocean, similar to what is depicted below.







# **Project Benefits**

Launch Site construction and operation Capital Investment in Nova Scotia - \$155M Initial Capital Investment, \$15M Annual Operating Expenses.

### Direct Jobs:

- Manufacturing & Production:
  - Machinists, Assembly Mechanics, Electrical Technicians, Tooling Fabricators, Precision Welders, Composite Mechanics.
- Manufacturing & Production:
  - o Aerospace, Mechanical, Electrical, Test.
- Administrative:
  - o IT, Supply Chain, Finance.

### Indirect Jobs:

- Spacecraft Manufacturers.
- Tourism, Retail.
- Transportation & Lodging.
- Home Construction.



Job Category	Veh	Launch Site icle Integrat otal FTE)	207	Growth Opportunities  With Payload Processing, Increase production rates, Other launch vehicle capability  (Total FTE)		
	2017	2019	2021	2021	2023	2025
Integration and Manufacturing	25	75	120	160	160	160
Engineering	15	25	45	55	60	65
Launch and Test Operations	35	50	65	65	75	90
Administrative	10	15	20	20	20	20
Total	85	165	250	300	315	335



# Facility Infrastructure

### Launch Pad Area

- Concrete Pad Foundation.
- Flame Propellant Tanks & Mounting.
- Exhaust Duct.
- Water Suppression System.
- Lighting Mitigation Towers.
- Propellant & Gas Run Lines.
- Power, Sewer & Electrical Distribution.
- Environmental HVAC.
- Perimeter Road & Fencing.

## Building & Facilities

- Administrative.
- Customer Offices.
- Manufacturing.
- Vehicle Integration.
- Control.
- Payload Processing.
- Propellant Storage.
- Launch Pad.
- Lodging.







## Environmental Assessment Process

### Environmental Assessment

- Is required by Nova Scotia
   Environment to ensure that a
   project's environmental and
   safety effects are minimized.
- Identifies environmental effects at an early stage in project development.
- Public consultation is an integral part of this process Community is invited to comment on the environmental assessment during the review period.
- Reviewed by Nova Scotia Environment and other relevant government agencies.
- Nova Scotia Minister of the Environment only provides approval once satisfied that environmental and safety effects will be minimized.

Proponent submits Environmental Assessment (EA) Nove Scotia Environment reviews EA - 50 day period

The first 30 days are open to public commenting provided to NSE.

Final decision and conditions delivered by Minister of Environment

### Baseline Studies

- Avifauna.
- General Wildlife.
- Plants.
- Wetlands.
- Watercourses & Fish Habitat.
- Sound Modelling.

- Groundwater & Geology.
- Visual Esthetics.
- Cultural & Heritage Resources.
- Socio Economic Conditions.
- Air Quality.



## Your Input is Important to Us ...

Your comments and feedback on the proposed spaceport facility are important to us. Please ask questions and be sure to pick up a handout before you leave.

# Community Liaison Committee

We will setup a Community Liaison Committee (CLC) that will meet regularly and be composed of local residents, a representative from the Municipality and a representative of the project. The purpose of the CLC will be to provide a forum for sharing information and



to provide a way for members of the community to bring their concerns to the project team, so that they can be rapidly address and resolved.

## Want to Contact Us Later?

## **Maritime Launch Services**

Suite 900, 1959 Upper Water Street, Halifax, N.S. B3J 3N2

Email: steve.matier@maritimelaunch.com

Phone: 1-505-553-0822

Website: www.maritimelaunch.com

## .. THANK YOU FOR COMING

#### PROPOSED CANSO SPACEPORT PROJECT

#### Location

- Located near Little Dover, Hazel Hill, and Canso, Nova Scotia.
- Access to the land is expected to coincide, in part, with the access road to the Sable Wind Farm, owned and operated by MODG, in partnership with Nova Scotia Power Inc.

#### **Benefits**

 Launch Site construction and operation Capital Investment in Nova Scotia - \$155M Initial Capital Investment, \$15M Annual Operating Expenses.

#### Rocket Technology, Launch Pathway

- Will be launching the Cyclone 4M (manufactured by Yuzhnoye SDO in Ukraine), a medium class rocket with a payload capacity of up to 3,350kg, into Sun Synchronous Orbit.
- Majority of launches to be conducted over the Atlantic Ocean between 7:00 a.m. and 12:00 p.m.

#### **Timeline**

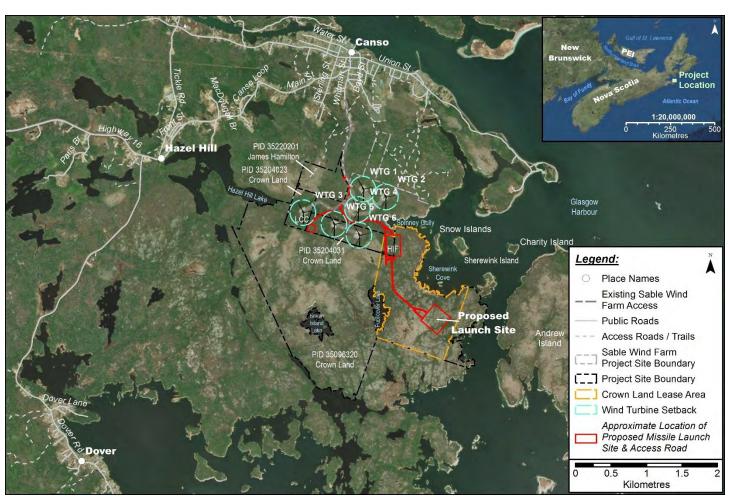
• Construction could start mid-2018, with first launch in 2020.

#### **Environmental Assessment (EA)**

- EA is on-going.
- Results from the Mi'kmaq Ecological Knowledge Study and Archaeological Resource Impact Assessment will be received mid-December.

#### **Community Liaison Committee (CLC)**

- Composed of local residents and representatives from the Municipality and the Project.
- Will meet regularly to provide a forum for sharing information between the community and the Project team.
- The first CLC meeting was held in Little Dover on December 13, 2017.



#### YOUR INPUT IS IMPORTANT TO US.....

Thank you for your continued interest in the MLS Nova Scotia project. Please visit our website if you would like additional information on the project, or to submit a guestion to the MLS team: http://www.maritimelaunch.com/

Posters from this Open House as well as the previous Open House held in October will be made available on Strum Consulting's website: <a href="https://strum.com/projects-portfolio">https://strum.com/projects-portfolio</a>









## MEET OUR TEAM







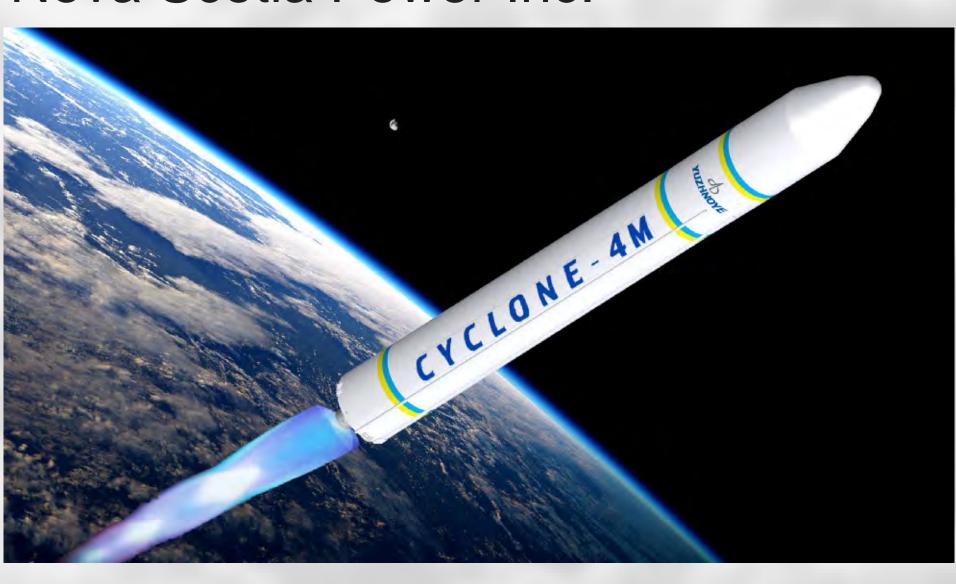
## Welcome

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# Facts ed near Little Dove

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First Launch								July	
Launch Season									8 Launches





# Project Benefits

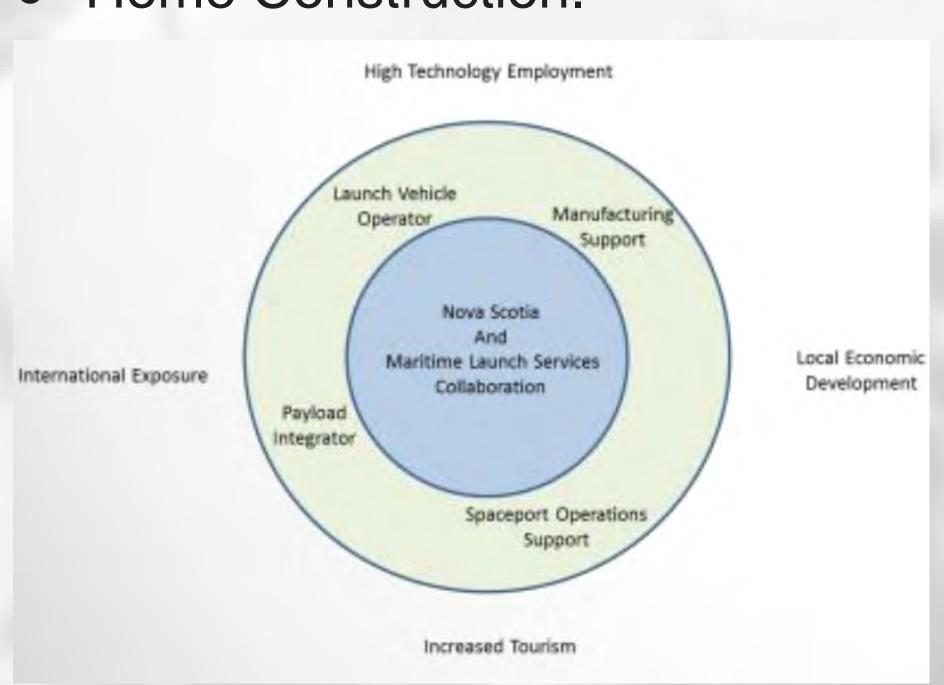
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Administrative	10	15	20	20	20	20
Total	85	165	250	300	315	335



### Habitats and Wetlands

The site consists of coastal habitats dominated by soft wood and mixedwood forest and is characterized by:

- Granite outcroppings
- Shallow, acidic soils
- Ericaceous and low-nutrient vegetation
- Interspersed treed swamps and bogs

Wetlands consisted of treed swamps, shrub swamps and bogs and were often observed as mosaics containing two or more wetland types.

# The following plant species of conservation concern were found intermittently throughout the Study Area:

- Slim-stemmed reed grass
- Lesser brown sedge
- Houghton's sedge
- Ovate spikerush
- Little curly grass fern
- Entire-leaved nitrogen moss



### **Dominant Vegetation:**

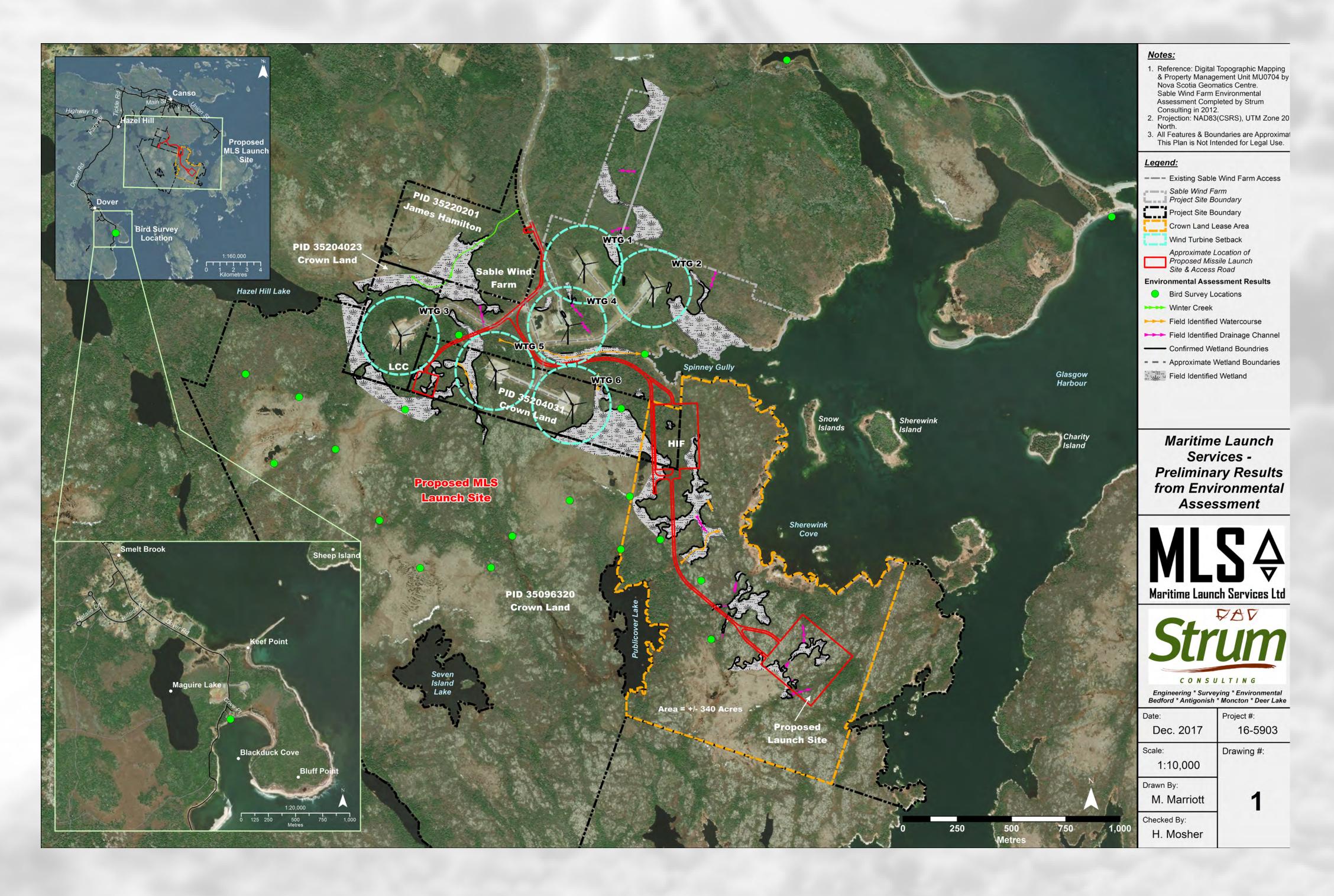
- Lambkill
- Leatherleaf
- Deergrass
- Cranberry
- Cottongrass
- Labrador Tea
- Pitcher Plant
- Bog Laurel
- Black Spruce
- Balsam Fir
- Eastern Larch
- Cinnamon Fern
- Wild Sarsaparilla
- Starflower
- Three-seeded Sedge
- Goldthread
- Black Huckleberry
- Mountain Holly

### **Bird Surveys:**

- Ongoing since January 2017
- Diversity and abundance of sea birds, waterfowl and land-based birds assessed throughout all four seasons.

### Interesting findings thus far:

- A number of rare Ipswich Sparrows were observed in bogs and barrens to the south of the Town of Canso
- Diversity of birds varies substantially throughout the year, with an increase in the spring and fall migration periods, suggesting bays and islands in the area are important stopover locations for birds as they migrate to the north or south.





## Mi'kmaq Ecological Knowledge Study (MEKS)

- Required as part of the Environmental Assessment process
- Protocol established by the Assembly of Nova Scotia Mi'kmaq Chiefs
- Purpose of the MEKS is to identify areas of historical and current use in the project area pertaining to lands, water and natural resources
- Key components of the study:
  - o Historical Review/Research
  - o Traditional Use Data
  - o Present Day Use



## Archaeological Resource Impact Assessment (ARIA)

- Required as part of the Environmental Assessment process
- Conducted under the terms of the Special Places Protection Act
- Purpose of the ARIA is to determine the potential for archaeological resources within the project area and to provide recommendations for appropriate resource management strategies.
- Key components of the assessment:
  - o Heritage Research Permit
  - o Historical background study
  - o Archaeological reconnaissance





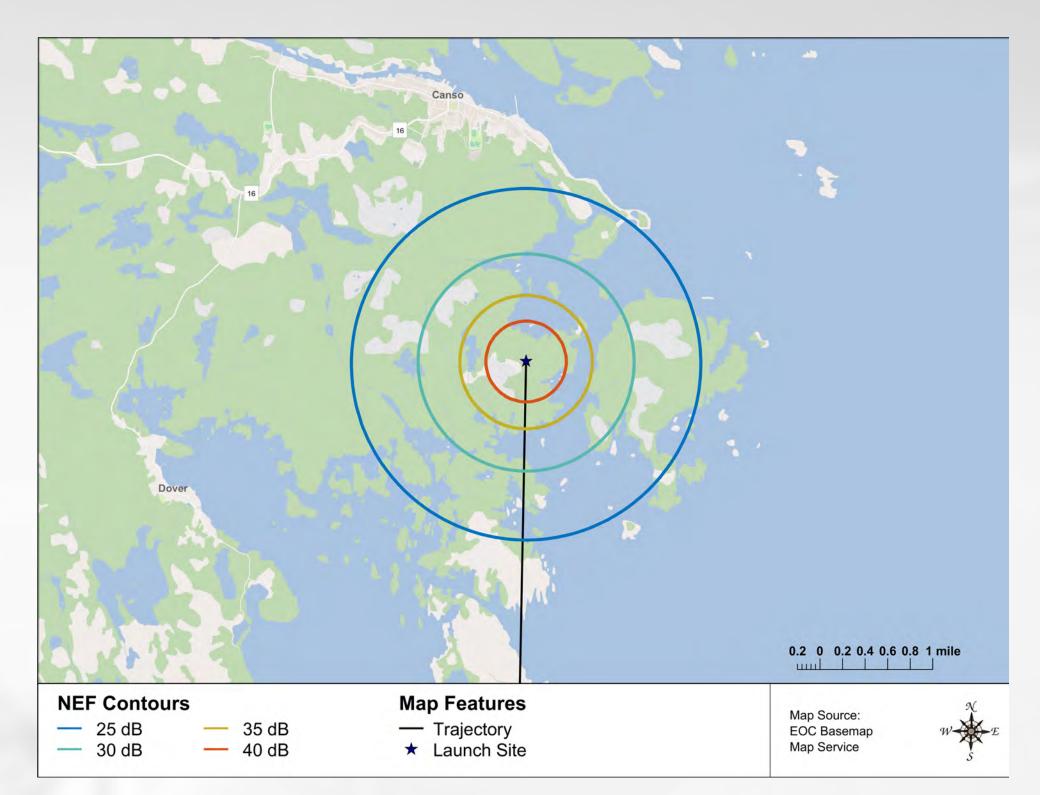
Preliminary results indicate there are no features of significance present on the Project Site. Results of the assessments will be incorporated into the EA document.



## Preliminary Launch Vehicle Noise Analysis

### Noise Exposure Forecast (NEF) Contours

- NEF was developed by Transport Canada to provide a methodology for assessing the perceived noise in the vicinity of airports.
- NEF calculations are normally forecast for a period of between five and ten years into the future.
- This system allows us to predict a community's response to aircraft noise:
  - o Above 35 NEF, complaints are likely to be high
  - o Above 25 NEF, restrictions for land use planning could occur for noise sensitive land uses (e.g. residential, schools, day care, nursing homes, hospitals)



The majority of the Town of Canso is below 25 NEF. At these levels, few complaints and disruptions are typically reported.

### Sonic Boom Peak Overpressure Contours

- Nova Scotia (Mainland)
  - o Sonic booms generated from the forecasted launch operations will not impact.
- Sable Island
  - o May experience low level sonic booms.
  - o Levels are not associated with adverse impacts

Halifax		
	Sa	able Island
		8 0 8 16 24 32 40 u

Typical Noise Levels						
Noise Source	dB(A)					
Sonic Boom	140					
Jet Takeoff (Near Runway)	120					
Rock Music Band (Near Stage)	110					
Ambulance Siren at 100 ft	95					
Garbage Disposal in Home at 3 ft	75					
Inside Department Store	55					
Normal Levels Inside Home	40					
Typical Library	35					
Quiet Rural Area	30					

To assess community noise, "A-weighting" is applied to approximate the frequency response of human hearing.

Maximum noise levels during a launch event, in the Town of Canso, will be between 90-100 dB(A).

The duration of the maximum noise levels within the community will be 60 - 90 seconds, 8 times a year.



## Your Input is Important to Us ...

Your comments and feedback on the proposed spaceport facility are important to us. Please ask questions and be sure to pick up a handout before you leave.

## Community Liaison Committee

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for members of the community to bring their concerns to the Project team, so they can be rapidly addressed and resolved. The first CLC meeting was held in Little Dover on December 13, 2017.

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Phone: 1-505-553-0822

Website: www.maritimelaunch.com

## ... THANK YOU FOR COMING

**Maritime Launch Services** 

Canso CLC Meeting

May, 16, 2018

Meting held at the Guysborough County Inshore Fisheries Association facility in Canso.

#### **Attendees:**

Maritime Launch Services: Stephen Matier, Joseph Hasay

MODG: Gordon MacDonald

Nova Scotia Business Inc.: Harvey Doane

CLC Committee Members: Janet Peitzsche, Judy Cook, Fin Armsworthy, Michael McLean, Frank Sander,

Sheri Parker, Ray White, Ginny Boudreau

Committee Members not in attendance: Della Horne, Harold Roberts

Meeting chaired by Stephen Matier.

Stephen let the committee know that MP Roger Cuzner would be visiting the Canso site tomorrow and that MP Cuzner has been a good supporter of the project. Stephen told the committee that Minister Freeland and her staff are also supportive of the launch project.

Stephen told the committee that he was in Ottawa two weeks ago for meetings which included a meeting with MP Cuzner and MP Lockhart from New Brunswick. During the same trip he also had meetings in Toronto with potential investors. This was in conjunction with Jacobs Capital Management who MLS has brought on board to help raise capital to fund the launch project.

Launch site design work is ongoing as is work on the Environmental Assesment. MLS is working on a contract with Yuzhnoye. The work with Nav Canada is on going.

Stephen had a very positive meeting with IMP during which they discussed the potential to work in collaboration with IMP.

Frank Sander suggested the MLS might want to reach out to Stelia / Airbus for potential investment.

Stephen continued with his project review communicating that he is pleased with the progress of the big pieces of the project. He recently met with Strum Consulting to review the EA report. From his review it seems to be well prepared requiring some minor edits to ensure a logical flow. Stephen is hoping to work with Strum on the final edit of the EA report the first week of June.

Ginny asked Stephen that as the partnership comes together, is MLS trying to keep the benefits and employment in the county. Is the commitment there? Half a job, one job – they are all big to this county. Stephen responded that he had a similar question from IMP. These companies are hearing the message. From the beginning MLS was pleased to see that NSCC was offering programs which fit the labour requirements for the project.

Judy mentioned that small businesses don't want to miss the opportunity for growth associated with the launch project.

Stephen continued with the explanation of the EA process explaining that the documentation from the CLC meetings would be included with the report. He went on to say that a lot of people would like to come out for the September shovel ceremony. Everyone is waiting for this event.

Harvey mentioned that the various economic development agencies have met to explore opportunities for local businesses because of the launch project.

Gordon supported this comment adding that the site was selected for its geographic location. Because of this, services will need to located close to the site.

There was a general discussion about the importance of supporting local enterprise and providing people with adequate notice of progress so that businesses can ramp up accordingly. The start of construction with help to define the time line in order to start planning for business opportunities.

There was a discussion regarding the EA process, mainly around the timing of the review. Stephen explained that once the EA is complete, the land will be surveyed, divided, and a lease would be issued. Optimally MLS would like to have a ground breaking in the fall. The CLC group asked that an email be sent to them once the EA is submitted.

Stephen let the group know that a detailed design document is ready for issue to a design firm. Road construction will entail roads from the wind farm down to the HIF and the control centre. Maybe roughed into the launch pad also. There was a discussion regarding the potential to upgrade or repair the existing local roads leading up to the wind farm.

A question was asked about emergency service upgrades. Stephen explained that this would be a key part of the project and that there would be no need to build into the site since providers are close by in the community. MLS will plan to help upgrade emergency services as required. This would be a direct give back – to beef up emergency services as required. The local station meets response requirements. MLS has to figure out how to start this process. The local fire chief would have a say in how it would be structured. EMO has also been involved.

There was a question regarding the electrical grid which resulted in a general discussion regarding the potential for upgrades. Stephen mentioned that MLS has met with Nova Scotia Power to have preliminary discussions regarding the anticipated power requirements for the launch site. Actual requirements will come from the A&E plan.

A question was asked regarding if the internet service in Canso will be improved. Stephen responded that new fibre optic cable would be required for data transmission to the site. There was a general discussion regarding the fact that the community did not want to foot the cost required for infrastructure upgrades.

There was a general discussion regarding how the rocket sections would be shipped into the launch site. Stephen indicated that they would probably be shipped to Mulgrave and then barged back to Canso. There is the potential to have a roro vessel deliver the sections to Canso and then truck them up over the hill to the launch site. The final call would that of the roro vessel's captain. Two rockets would be shipped in on each ship which would require six truck loads to the site. Stephen commented that hopefully these trucks will be local.

Stephen discussed that regarding local employment services will be out for tender. MLS can specify that extras points will be awarded for hiring local. MLS will conduct regular air and water quality monitoring with or without a requirement to do so.

The floor was opened for questions from the CLC.

Janet asked about the learning curve regarding the space port and when this would kick in. Stephen proposed that as part of the next CLC meeting that a complete project overview be presented to the group as a refresher. Could also hold an open house once the EA has been submitted.

Ginny indicated that once the EA has been filed that the fisheries association will probably request a meeting to review it.