

May 2017

## Fort St. John Hospital Heliport Steering Committee

# Final Report of the Steering Committee

### Executive Summary

In 2016 a Fort St. John Hospital Heliport Steering Committee was established to review the feasibility of locating a heliport adjacent to the Fort St. John Hospital. The Steering Committee was composed of representatives from the Northern Health Authority (Northern Health), Fort St. John (FSJ) Hospital, BC Emergency Health Services, which is responsible for the BC Ambulance Service (BCAS), City of Fort St. John, Peace River Regional District (PRRD) Electoral Areas B and C, Canadian Association of Petroleum Producers (CAPP), Energy Services BC and BC Hydro. Following its review and based on a number of considerations, the Steering Committee has concluded **that it is not economically feasible nor is it medically critical, at this time or for the foreseeable future, to locate a heliport within close proximity to the Fort St. John Hospital.**

The Steering Committee has also concluded that, because of the vital importance of ensuring the safe and expeditious transport of critically injured persons from remote locations to the Fort St. John (FSJ) Airport and by ground transport between the FSJ Airport and the FSJ Hospital, the following measures should be put in place as soon as possible:

1. An effective monitoring system be established to gather and report data on a regular basis on dedicated and chartered BCAS fixed-wing and helicopter medical emergency transfers from remote locations to the FSJ Airport and on ground transport emergency transfers between the Airport and the FSJ Hospital;
2. Work camp emergency medical transport procedures include timely advance notification to the BCAS and the FSJ Hospital when using helicopter transportation of critically injured persons; and
3. Communications are carried out with the Canadian National Railway (CNR) on the possibility of the CNR managing train movements during BCAS emergency medical ground transports between the FSJ Airport and the FSJ Hospital.

The Steering Committee noted that a heliport near the hospital could become necessary in the future. For that reason, it is important for the City of Fort St. John and the Peace River Regional District to review their respective zoning bylaws to ensure that any future development near the Fort St. John Hospital will not affect or obstruct the operation of a

future heliport to the extent that the heliport would no longer meet Transport Canada regulations.

As a result of these conclusions, the following **actions** have been taken:

1. BCAS has put in place an effective monitoring system to gather and report data on a regular basis respecting:
  - i) Dedicated and chartered BCAS fixed-wing and helicopter medical emergency transfers from remote locations in Northeastern BC to the FSJ Airport; and
  - ii) BCAS ground transport emergency transfers between the FSJ Airport and the FSJ Hospital.
2. As the agency responsible for the safe, efficient and expeditious transportation of critically injured persons between the Airport and the Hospital, BCAS will provide an annual report to Northern Health, the FSJ Hospital, the City of Fort St. John, the PRRD and CAPP on the extent and nature of these movements.
3. BCAS will call the Canadian National Railway in life-threatening situations to explore the possibility of CNR managing train movements during a BCAS emergency medical ground transport between the FSJ Airport and the FSJ Hospital.
4. CAPP will encourage oil and gas companies operating in Northeastern BC to openly display notices at their work camps highlighting the contact information for BCAS and the Fort St. John Hospital Emergency Department so that those bodies can be notified as soon as an emergency helicopter has been secured for transportation assistance.
5. The City of Fort St. John has designated the lands surrounding the Fort St. John Hospital as a Development Permit Area (an area with specific restrictions). This designation ensures that the Obstacle Limitation Surface (OLS) is protected to allow for the development of a future heliport, if one is required at some point in the future, and that any future development within that area will not foreclose the possibility of a heliport.
6. The Peace River Regional District has put in place, in the context of an expected flight path for a helicopter, provisions to ensure that a prospective heliport adjacent to the Fort St. John Hospital will not be affected by possible future development that may take place on PRRD land located near the Hospital.

## Background

Following the opening of the new Fort St. John Hospital in 2012, the Northern Health Authority received requests to look into the possibility of locating a heliport at or near the new Fort St. John Hospital. In 2013, Northern Health and the BC Ambulance Service appointed an independent facilitator to oversee and manage a review of the case for a heliport near the hospital. To ensure that all relevant interests were engaged in this review process, a Heliport Review Committee, composed of representatives from the Northern Health Authority, the Fort St. John Hospital, the BC Ambulance Service, Energy Services BC, the Fort St. John Petroleum Association, the City of Fort St. John and the Peace River Regional District, was formed. The Committee was asked to explore and assess options for locating a heliport at or near the hospital as well as the current practice of using ground transport of critically injured persons between the Hospital and the Airport.

A range of factors were considered during the 2013 review, including medical relevance for a heliport (taking into account that the new hospital was closer to the North Peace Regional Airport than the former hospital), the routing options from the airport to the Hospital, the timeliness and efficiency of ground transport of critically injured persons between the airport and the hospital, heliport operation and management requirements, and financial costs associated with the design, construction, operation and maintenance of a heliport.

Over the five years preceding the 2013 review, there had been a relatively low frequency of emergency landings on the rooftop heliport of the former hospital. The Heliport Review Committee noted the potential for a significant increase in heliport landings, however, given projections for industrial expansion in the North Peace region from oil and gas development, pipeline construction and mining. If such an expansion occurred, it could substantially increase accidents in remote locations and the corresponding need for medical evacuations.

Based on its review of these considerations, the Heliport Review Committee concluded that Northern Health should work with the oil and gas sector, the City of Fort St. John and the Peace River Regional District to facilitate a heliport being located near the hospital when the following specific conditions outlined in Committee's 2013 report were met:

- An organization has declared its intent to be the Heliport Operator and is prepared to make a commitment to comply with all Transport Canada requirements as a holder of the Heliport Certificate under CAR 305;
- Sufficient funds have been accrued for the design, construction and ongoing operation and maintenance of the heliport;
- Both the City of Fort St. John and the Peace River Regional District are willing to zone the land surrounding the proposed location for the heliport to ensure that no

existing or future development could affect heliport operations to the extent that the heliport would no longer meet Transport Canada regulations; and

- A schedule and a plan for the design and construction of the heliport is in place as described in the GroundEffect report. *(Note: GroundEffect is a heliport consulting company that was retained to provide advice on the feasibility, design and costs associated with a possible heliport.)*

The Heliport Review Committee's Report was submitted to Northern Health on July 16, 2013 (*Fort St. John Hospital Heliport Review – Final Report of the Review Committee, July 16, 2013*).

## The 2016-2017 Review Process on Feasibility

In January 2016, a new **Fort St. John Heliport Steering Committee** was established to **“review the 2013 Fort St. John Hospital Heliport Review report, to assess the requirements and conditions set forth from that report with respect to the feasibility of construction, maintenance and operation of a helipad adjacent to the Hospital and, if it is determined to proceed with the heliport, prepare a plan and schedule for design and construction of the heliport.”**

The Steering Committee was composed of the Northern Health Authority, Fort St. John Hospital, BC Ambulance Service, City of Fort St. John, Peace River Regional District Electoral Areas B and C, Canadian Association of Petroleum Producers, Energy Services BC and BC Hydro ([Appendix 1](#)).

The Terms of Reference ([Appendix 2](#)) describe the tasks that were carried out during this review.

## Understanding Heliport Operations

The Steering Committee received a briefing on possible FSJ Hospital heliport operations from David Brown of GroundEffect Aerodrome Consulting Ltd., which had previously been engaged by the Heliport Review Committee in 2013. Highlights from that briefing are as follows:

**Evaluation Criteria** – Based on the evaluation criteria for heliports, the recommended heliport classification would be H3, a classification that requires an emergency landing area in the event of a crash landing in order to minimize public injury and is accessible by single engine helicopters.

**Dimensions** – The proposed heliport would be built to primarily serve helicopters 13 metres in length and could accommodate larger helicopters 16-17.5 metres in length such as Bell 212 and 412 helicopters.

**Aviation Criteria** – The objective would be for two flight paths. The heliport would be VFR and not IFR. Night operations require lighting and the pilots may use night vision goggles. GPS is becoming the way of a “point in space.” STARS uses this approach. Occasional strong prevailing winds from the North should not pose difficulties for helicopter pilots. There are no power lines to the south that would cause an impediment to a preferred flight path. The prevailing winds in the community are South Westerly.

**Medical Considerations** – As the maximum distance a stretcher or wheelchair may be used to transport a patient from a helicopter to a hospital entrance is generally 100 metres, ground transport via ambulance will be required since the location of the proposed heliport would exceed 100 metres. The proposed heliport locations were estimated to be at least 130 metres from a hospital entrance, resulting in the requirement for a ramp to reach a BCAS ambulance for ground transportation to the hospital entrance. The recommendation was made that the ambulance would transport the patient to the Ambulance Bay adjacent to the Emergency Department and not the Birthing Centre entrance.

### **Engineering and Maintenance Considerations**

Key factors to be considered were:

- What is required to maintain the heliport?
- What is the proximity of the heliport to electrical/mechanical services?
- If the heliport is located close to hospital is there a need to consider an intake ventilation system?
- Will the heliport be purpose driven and limited to medical transport or also open to commercial landings?
- Would the heliport operator be able to charge for all landings in order to offset the operational costs?

**Municipal Zoning and Heliport Security** – Who would monitor the heliport, who would be on call and who would be responsible for security and maintenance?

**Heliport Maintenance and Operational Requirements** – Who would manage the heliport and who would perform daily inspections and document findings as required by Transport Canada? Snow removal can be a problem for the approach because, if it is not done properly, white-out conditions could result. Vehicles containing loose belongings in the back of a pickup truck may pose debris problems and may not be allowed to park in the vicinity of the heliport. Helicopter noise could pose problems to nearby neighbourhoods and the Birthing Centre at the Hospital.

## Understanding Heliport Management

The Steering Committee received a briefing on heliport management from Transport Canada's Civil Aviation Safety Inspector, Gerard Charlton. Highlights from that briefing are as summarized here.

General duties and responsibilities for heliport management are delegated from the Minister of Transport. An Accountable Executive is responsible for the management of a heliport under the *Aeronautics Act*. Accountable Executives may or may not have direct operational responsibility; however, they do have organizational control over the facilities and personnel managing the heliport.

An Accountable Executive is not meant to be a stand-alone position, and most often is an existing higher-level manager (who has both administrative and, to at least a degree, some financial control over matters). There is no preferred model as each responsibility centre chooses a person it believes will function in this role best.

The Heliport Manager is often a Maintenance Manager who is usually around the heliport facility on a daily basis and can be counted on to organize schedules and maintenance actions.

The Heliport Operations Manual (HOM) is a manual that lays out all the responsibilities of those involved in the heliport's operations, along with procedures to follow. In the case of a possible heliport facilities being located adjacent to the FSJ Hospital these facilities should not be deemed as being difficult to maintain. A heliport adjacent to the FSJ Hospital would not be complex as helicopter operations would be relatively routine. For example, the heliport would not require Instrument Flying infrastructure and certainly not an expensive Instrument Landing System (ILS). It is a Visual Flight Rules (VFR) proposal, so there are no navigation aid concerns (which can be expensive). Most general mechanics / maintainers are quite capable of maintaining the equipment for even the most complex of heliports.

An organization must be declared as the Heliport Operator and is accountable and responsible to comply with all Transport Canada requirements as the holder of the Heliport Certificate. One of the Steering Committee members, Moira Green, who served as the former FSJ Airport manager for four years emphasized that operating an aerodrome can be quite arduous, depending on the requirements. Fire suppression would be under the guidance of the Fire Department and maintenance staff would require basic training.

Other concerns regarding the responsibility and accountability to manage and operate a heliport on FSJ Hospital property were noted based on past experience at the former FSJ Hospital. While recognizing that the heliport at the old hospital was situated on the roof, there would nevertheless be similar operational implications for the new hospital. At the old hospital, there were significant safety concerns. Concerns related to maintaining the heliport free from debris, ensuring the safety to people on the ground, receiving

insufficient notice from the helicopter company/ industry regarding the estimated time of arrival of the patient at the hospital (which increased safety risk) and, at times, inappropriate use of the heliport by transporting patients that were able to walk off the helicopter and into the emergency department. For instance, there was an average of approximately 10 landings per year; of those, one case annually would be considered an emergency requiring use of the heliport for transport.

The estimated cost for the construction of the heliport is \$400,000 – 500,000, and the annual cost of operations is at least \$15,000. There would be additional cost implications to Northern Health to site a heliport at the FSJ Hospital because the Hospital is a P3 (public private partnership) and involves ACML, the property owner. In such cases, the costs associated with a P3 could potentially increase three-fold, according to an estimate provided by Northern Health ([Appendix 3](#)).

## **Other Considerations**

The Steering Committee emphasizes the importance of the City of Fort St. John and the Peace River Regional District respectively putting in place measures to ensure that future developments within the flight path of any proposed sites for a hospital heliport do not limit or impede future heliport options. There is an opportunity to do so in upcoming planning processes, and any measures that may be taken should consider maximum and minimum heights to give appropriate contours for flight path.

## **Transportation of Critically Injured Persons**

The Steering Committee was also asked to review the current practice of transporting critically injured persons from locations in the North Peace River Region via the North Peace Regional Airport to the Fort St. John Hospital.

BCAS reported that it currently takes approximately 13 minutes for the local BCAS ground ambulance crew to transport a patient from the gate at the Fort St. John airstrip to the BC Ambulance bay at the hospital. This time is an increase from a previous time of seven minutes three years ago because there is now an extra set of traffic lights en route and increased traffic due to the development of service buildings and offices along the airport road.

It was noted that, on occasion, industry is not notifying BCAS in advance in a timely manner so as to allow BCAS paramedics to reach the airport quickly to meet the incoming helicopter. A delay in notification can result in a delay in transporting patients to the hospital. When industry or the helicopter company notifies BCAS at the time they send the helicopter, BCAS has opportunity to have a crew meet the helicopter at the airport even if this means having to dispatch a crew from another community. BCAS explained that it has instituted a regional approach in the Peace River Region to ensure that

ambulances are available as back-up in cases in which ambulance service capacity is fully being used in a specific location.

## Conclusions

The Steering Committee reached consensus and came to the following conclusions:

1. It is not economically feasible nor is it medically critical, at this time or for the foreseeable future, to locate a heliport within close proximity to the Fort St. John Hospital.
2. Immediate efforts should focus on improving the efficiency and effectiveness of transporting critically injured persons from remote locations to the FSJ Airport and on ground transport between the FSJ Airport and the FSJ Hospital.
3. An effective monitoring system needs to be put in place to gather and report data on a regular basis on dedicated and chartered BCAS fixed-wing and helicopter medical emergency transfers from remote locations to the FSJ Airport and on BCAS ground transport emergency transfers between the airport and the FSJ Hospital.
4. The oil and gas sector needs to include in its work camp emergency medical transport procedures the requirement for timely advance notification to the BCAS and the FSJ Hospital when using helicopter transportation of critically injured persons.
5. Communications need to take place with the Canadian National Railway on the possibility of the CNR managing train movements during BCAS emergency medical ground transports between the FSJ Airport and the FSJ Hospital.
6. The City of Fort St. John and the Peace River Regional District need to review their respective zoning bylaws to ensure that any future development near the Fort St. John Hospital will not affect or obstruct the operation of a future heliport to the extent that the heliport would no longer meet Transport Canada regulations.

As a result of these conclusions, the following **actions** have been taken.

1. BCAS has put in place an effective monitoring system to gather and report data on a regular basis respecting:
  - a. Dedicated and chartered BCAS fixed-wing and helicopter medical emergency transfers from remote locations in Northeastern BC to the FSJ Airport; and
  - b. BCAS ground transport emergency transfers between the FSJ Airport and the FSJ Hospital.



2. As the agency responsible for the safe, efficient and expeditious transportation of critically injured persons between the FSJ Airport and the FSJ Hospital, BCAS will provide an annual report to Northern Health, the FSJ Hospital, the City of Fort St. John, the PRRD and CAPP the extent and nature of these movements.
3. BCAS will call the Canadian National Railway in life-threatening situations to explore the possibility of CNR managing train movements during a BCAS emergency medical ground transport between the FSJ Airport and the FSJ Hospital.

**Note:** The CN Emergency Line operates 24 hours/day and 7 days/week and can be reached by calling 1-800-465-9239. CN's Railway Traffic Control (RTC) is responsible for all rail related emergency incidents. The average train frequency in Fort St. John is one train per day. The mile point of the line that crosses the Airport Road is 728.4. The line runs through the Fort Nelson subdivision. Once the RTC is notified of an emergency, it ensures that all relevant interests, such as fire, 911, medical ambulance, are notified. Then CN can work with a number of scenarios to help ensure quick and safe ground transport of a critically injured person from the airport to the hospital is carried out. These scenarios may range from stopping the train movement or splitting the cars.

4. The Canadian Association of Petroleum Producers will encourage oil and gas companies operating in Northeastern BC to openly display notices at their work camps highlighting the contact information for BCAS and the Fort St. John Hospital Emergency Department so that these bodies can be notified as soon as an emergency helicopter has been secured for transportation assistance.
5. The City of Fort St. John has designated the lands surrounding the Fort St. John Hospital as a Development Permit Area (an area with specific restrictions). This designation ensures that the Obstacle Limitation Surface (OLS) is protected to allow for the development of a future heliport, if one is required at some point in the future, and that any future development within that area will not foreclose the possibility of a heliport.
6. The Peace River Regional District has in put in place, in the context of an expected flight path for a helicopter, provisions to ensure that a prospective heliport adjacent to the Fort St. John Hospital will not be affected by possible future development that may take place on PRRD land located near the Hospital.

## **Appendix 1**

### **Members of the Fort St. John Hospital Heliport Steering Committee (2016-2017)**

Northern Health Authority

- Angela de Smit
- Steve Raper

Fort St. John Hospital – Brad Gullason

BC Emergency Health Services (authority responsible for the the BC Ambulance Service)

- Rick Mowles
- Rick Loucks
- Ken Craig

City of Fort St. John – Moira Green

Peace River Regional District Electoral Area B – Karen Goodings

Peace River Regional District Electoral Area C – Brad Sperling

Energy Services BC – Art Jarvis

Canadian Association of Petroleum Producers – Chris Montgomery

BC Hydro – Robert Peever

Fraser Basin Council – David Marshall (Facilitator)

## Appendix 2

### Steering Committee Terms of Reference Fort St. John Hospital Heliport Implementation (2016-2017)

February 2016

Purpose: To review the Fort St. John Hospital Heliport Review report (to be referred to as the FSJH Heliport report), to assess the requirements and conditions set forth from that report with respect to the feasibility of construction, maintenance and operation of a helipad adjacent to the Hospital and, if it is determined to proceed with the heliport, prepare a plan and schedule for design and construction of the heliport.

#### Tasks:

1. Establish a Fort St. John Hospital (FSJH) Heliport Steering Committee composed of representatives from:
  - Northern Health Authority
  - Fort St. John Hospital
  - BC Emergency Health Services
  - City of Fort St. John
  - Peace River Regional District – Electoral Area B
  - Peace River Regional District – Electoral Area C
  - Canadian Association of Petroleum Producers
  - BC Hydro
  - Energy Services BC
2. Review the recommendations on pages 4 to 5 in the Fort St. John Hospital Heliport Review report to fully understand their implications.
3. Conduct a site inspection of the proposed location for the heliport and review siting options on the Hospital property as well as the land adjacent to the Hospital property for the heliport landing pad.
4. Acquire a reasonable understanding of heliport operations.
5. Conduct an analysis of the following implementation considerations to include:
  - i) the identification of an organization or governance structure that will assume the responsibilities of the heliport operator and thus commit to comply with all Transport Canada requirements for heliport operations,
  - ii) detailed cost estimates for the design, construction, and ongoing operation and maintenance of the heliport,

- iii) prospective funders to contribute to the capital costs of the heliport,
  - iv) a sustainable financial model/formula to support the ongoing operational costs of the heliport including the possible involvement of the Hospital building manager, ISL/ACML,
  - v) City of Fort St. John and Peace River Regional District zoning bylaws to ensure that heliport operations will not be adversely affected, and
  - vi) provisions to maintain public safety due to the relatively isolated nature of the heliport and future proximity to residential housing.
6. Following the analysis of the above implementation considerations, if the decision is made to still proceed with a heliport, prepare a schedule and a plan for the design and construction of the heliport.
7. During the process of analyzing the implementation considerations, review the current practice of transporting critically injured persons from locations in the North Peace River Region via the North Peace Regional Airport to the Fort St. John Hospital.

## Appendix 3

### Northern Health Letter on Costs and Implications of Heliport



Northern Health Regional Office  
#300-299 Victoria Street, Prince George, BC V2L 5B8  
Telephone: [250] 565-2303  
Fax: [250] 565-2753  
[www.northernhealth.ca](http://www.northernhealth.ca)

February 14, 2016

Sent via email

Angela De Smit  
Chief Operating Officer, North East  
Northern Health  
Suite #230-990-100<sup>th</sup> Ave  
Fort St John, BC  
V1J 5S7

Dear Angela:

**Re: Costs and Implications Heliport Fort St John**

This letter is to confirm our discussion, NH is in a Public Private Partnership with ISL Health to design-build-finance-maintain the new Fort St John Hospital and Peace Villa.

NH is in year 4 of a 32 year concession agreement with ISL Health. As a result, NH no longer has any facility maintenance staff in the community of Fort St John. Further the P3 arrangement means that should we wish to do further development on site 9or adjacent to the site), or maintain or operate anything on site (adjacent), we will have to request and have it designed and priced by ISL Health. Their building operator, Angus Consulting Management Limited (ACML) would be asked to price the facility maintenance aspect of how the Helipad would be operated.

I am able to provide order of magnitude pricing on the following based on my experience with the project since inception in 2007:

- Design and Build Helipad - \$3 - \$3.5 Million.
  - Day use only, instrumentation, night use?
- Lifecycle costs of Helipad and equipment - \$100,000 per annum
  - 27 years remaining
  - highly dependant on requirements such as emergency power, 24-7 equipment uptime for beacons, lighting.
- Facility Maintenance and Repair \$50,000 per annum
  - depending on requirements, if 24-7 operation will be significantly more as currently only one night shift FTE on staff which would be required to clear the landing pad ensure safety prior to landing so must be available 24-7.

- Our previous experience landing on the old hospital, Fire Crew had to be on site and streets closed off, entrances blocked during landings. We paid the fire hall for each landing.
- There are also pass through costs such as snow clearing contracts in place which would have to be considered. Clearing standards are currently less than 2 cm of snow, if more stringent requirements, will cost additional on this pass through contract.

Before I ask for pricing, I would need to be have all technical specifications, applicable Ministry of transport standards in place and agreed upon. Once I ask for pricing, if we decide not to do the work/project, who will pay for the detailed design, engineering, pricing work on ISL behalf? Who will pay for the lifecycle and FM modelling. I would estimate the engineering and modelling in total to be between \$25,000 and \$40,000 but this is very conservative.

Finally, I have other concerns with using the hospital site, or even land adjacent to the new hospital site. BC Ambulance staff must be used to load and unload patients from the ambulance and bring them to the Emergency department. This requires road building for the ambulance, maintenance and snow clearing. Further, any helipad distance from the hospital, safe landing and ditching patterns (dual) must be designed. Given the development of our current site, this will prove difficult if development across the street from the hospital begins to develop. I would think helicopters limited to dual engine turbine would be required for this type of site. Does BC Ambulance have access to this technology and will there be a unit placed in the NE for these purposes?

I am happy to come to your next available Heliport Steering Committee to respond to questions and have discussion.

Sincerely,



Michael Hoefler, BMLSc. MHA  
Regional Director  
Capital Planning & Support Services  
Northern Health

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