



KINGSTON AIRPORT

MOVING FORWARD

Screening Level Environmental Assessment

Sharing Initial Study Findings

Community Information Session – March 30, 2016

Introduction

Mr. Denis Leger

Commissioner of Transportation, Facilities
and Emergency Services

Mr. David Snow

Airport Manager /
Meeting Moderator

Ms. Colleen Gareau

Director of Strategic Communications

Airport Master Plan (2007)



Overall vision for airport



Systematic, controlled development of airport infrastructure to fullest potential



Components included in Airport Master Plan

- **Infrastructure development, including expansion (10-15 yrs. timeframe)**
- **Air Services development**
- **Airport land development**



Conducted numerous interviews with stakeholders



Held public information sessions

Airport Project / Land Use Review



Two separate and distinct consulting engagements

- **Airport Expansion Project**
 - **Screening Level Environmental Assessment**
- **Airport Land Use Development Review**



Purpose of Today's Meeting

- **Airport Expansion Project**
 - **Screening Level Environmental Assessment**

Meeting Purpose and Format



Purpose

- **Present Overview of Screening Level Environmental Assessment including:**
 - Scope
 - Timelines
 - Findings to date
- **Background on Airport Expansion Plan**
 - Air Service Development
 - Land Use Plan
 - Noise Study (2013)



Format

- **Present EA Findings**
- **Q&A Part 1**
- **Present Findings from Noise Study (2013)**
- **Q&A Part 2**



Airport Expansion Timeline – To Date

[Kingston Airport Expansion History Video](#)

Overview of Screening Level EA



Purpose - To share information with the public, exercise due diligence, and ensure compliance with applicable environmental legislation.



Scope

- Focus on natural/cultural environment
- Three technical studies:
 - Environmental Site Assessment (Phase I & II)
 - Archaeological Assessment
 - Ecological Impact Assessment
- Community Consultation
- Present Findings to Council

Environmental Site Assessment (Phase I & II)



Purpose – To investigate potential environmental concerns and confirm presence or absence of soil and groundwater contamination.



Scope

- Phase I ESA completed in November 2015 which identified several areas of potential environmental concerns.
- Phase II ESA completed in December 2015.
- Collected/analyzed soil and groundwater samples from north & south runway expansion areas and the proposed terminal expansion.
- Compared analysis results to documented standards to determine remediation/mitigation requirements (if applicable).



Soil Sampling



Findings

- No groundwater contamination concerns within the airport expansion area.
- Soil quality on the site meets the general requirements for the land use.
- Localized areas of impacted soil were identified but are not considered significant.



Mitigation

- On-site management during construction.

Archaeological Assessment (Stage I)



Purpose – To identify any known archaeological sites and resources on or within the vicinity of the study area, as well as to assess the archaeological potential of the study area.



Scope

- Reviewed existing records to determine archaeological potential.
- Site inspection completed in October 2015.



Findings

- Much of the area has been previously disturbed (fill placement etc.)
- Potential for culturally significant resources in south and north runway expansion areas.



Mitigation

- Stage 2 investigation (hand test pits) to be completed in the spring 2016 (once ground has thawed).
- Construction monitoring.



Archaeological Site Inspection

Ecological Investigation



Purpose – To review potential impacts of the airport expansion to the natural environment.



Scope

- Reviewed and interpreted background data / aerial photographs.
- Field investigation completed in October 2015 (fish, vegetation, wildlife, SAR).
- Contacted regulatory agencies to determine provincial or federal approval / permitting requirements.



Ecological Fencing



Findings

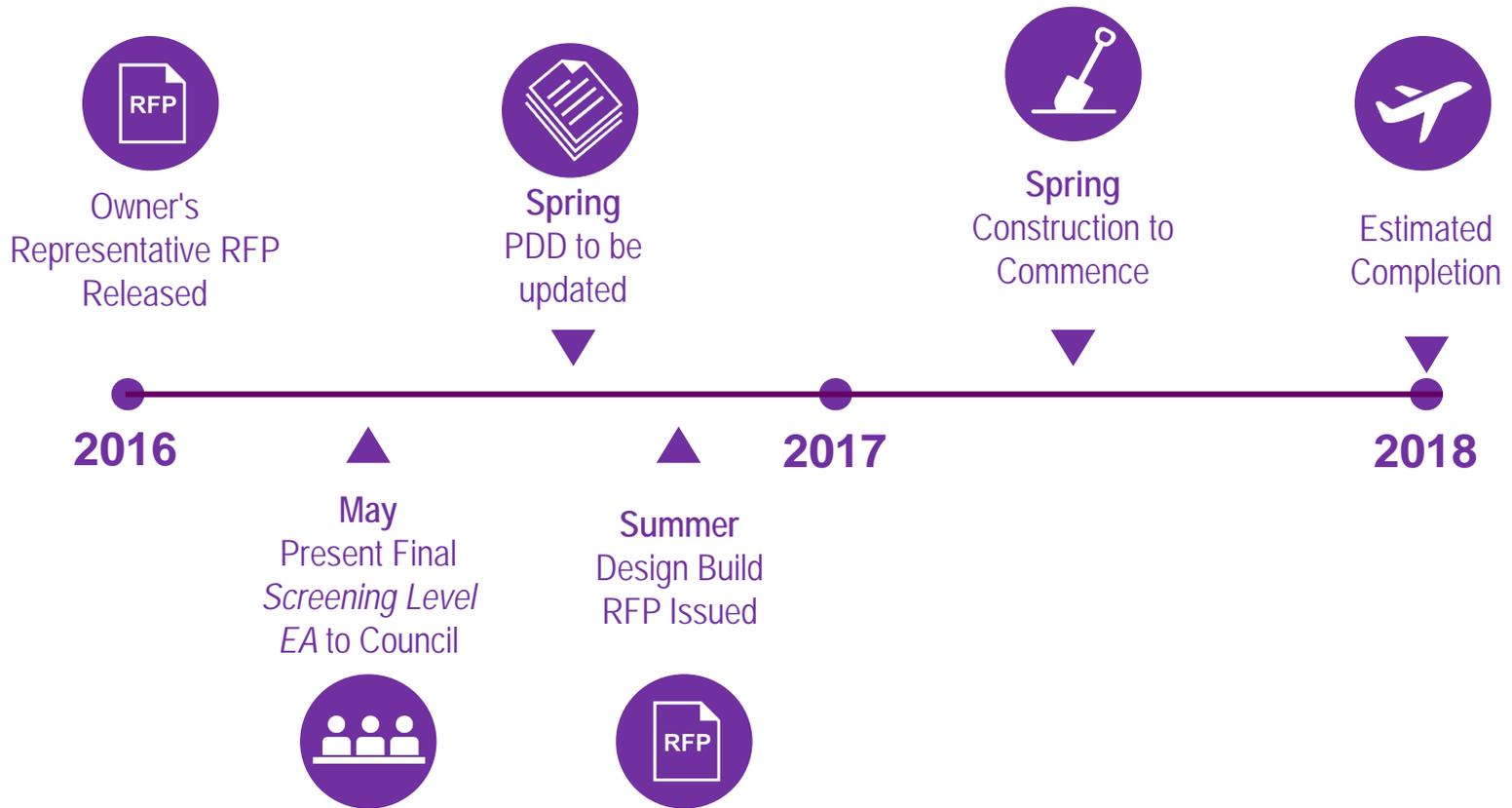
- No significant species or habitat identified within the areas of disturbance.
- Potential for incidental wildlife encounters during construction.



Mitigation

- Standard construction mitigation including: construction scheduling, erosion and sediment control, replanting and re-vegetation and fencing.
- Follow-up investigation proposed in the spring/summer 2016 to observe the site under seasonal conditions.

Airport Expansion Timeline - Next Steps



Noise Study

- Noise Exposure Forecast (NEF) Contour Plans were developed in 2013 for the proposed Runway 01-19 extension at Kingston Airport.
- NEF are used around the world for estimating the level of noise from aircraft operations.
- A NEF is not an estimate of the absolute values of noise levels in the vicinity of an airport but is rather an estimate of the probability of complaint about noise by residents close to the airport.
- The calculation of NEF contours is influenced by a number of factors related to flight operations at the airport including number of operations per day, the type of aircraft, engine type, takeoff weight, flight path, wind direction, time of day and others.
- Transport Canada recommends that residential housing be outside the NEF 30 contour.

Noise Study Continued

- The NEF 30 contour is approximately equivalent to an average 24-hour sound level of 61 dBA, which is representative of the sound levels associated with a two-lane minor arterial road (25 m away) or a rail line with about seven trains per day (40 m away).
- These NEF Contour Plans have been prepared for both the Peak Planning Day and the Average Day under existing (2012) conditions, 2026 conditions with no changes to existing runway, and 2026 conditions with an extended Runway 01/19.
- The sensitivity of the NEF 30 contour was modeled by incorporating an additional eight movements (four landings and four take-offs) by 737-800 aircraft during the Peak Planning Day in 2026 with the extended runway scenario.

Noise Study Continued

AVERAGE PLANNING DAY – TOTAL MOVEMENTS



Noise Study Continued

PEAK PLANNING DAY – TOTAL MOVEMENTS



Noise Study Continued

PEAK PLANNING DAY PLUS EIGHT 737-800 MOVEMENTS





Noise Study Continued

- Manufacturers world-wide have and continue to design quieter aircraft.
- Larger propeller driven and jet aircraft certified after 2006 are manufactured to more stringent International Civil Aviation Organization (ICAO) Chapter 4 noise requirements.
- The “Q” in Q400 means quiet; certified to ICAO Chapter 4 requirements.
- Bombardier CS100 jet meets ICAO Chapter 4 requirements using advanced engine technology.

Noise Study Continued

AIRCRAFT MOVEMENTS BY TYPE

Aircraft Type and INM Equivalent	2012 Average Daily Movements	2012 Peak Planning Day Movements	2026 Average Daily Movements	2026 Peak Planning Day Movements
DHC8 (represents Dash8 & Q400)	7.09	14.53	10.21	21.17
Beech B1900 (represents 19-seat aircraft)	7.34	15.04	9.23	19.15
Cessna CNA441 (represents twin-turbine 6-to-8 seat aircraft)	3.26	6.69	3.24	6.72
Beech BEC58P Baron (represents twin-piston General Aviation aircraft)	2.06	4.22	2.05	4.26
Cessna C-172 (represents single-piston General Aviation aircraft)	77.45	158.77	82.35	168.80
Lockheed C-130 Hercules (represents military aircraft)	0.25	0.50	0.27	0.56
CL601 (represents CRJ705 Regional Jet)	0.45	0.92	0.65	1.34
Total	97.90	200.67	108.00	222.00

Noise Study Continued

DISTRIBUTION OF AIRCRAFT MOVEMENTS BY RUNWAY

Aircraft Type	Runway 01	Runway 19	Runway 07	Runway 26
C172 - Arrivals	15 %	41 %	17 %	27 %
C172 - Departures	24 %	27 %	15 %	34 %
Other Aircraft - Arrivals	13 %	65 %	12 %	10 %
Other Aircraft - Departures	44 %	18 %	6 %	32 %
CRJ - Arrivals	17 %	83 %	0 %	0 %
CRJ - Departures	71 %	29 %	0 %	0 %

Air Quality

- Kingston Airport has very low traffic levels, especially by larger turboprop aircraft.
- Aircraft emissions are trending down rapidly with newer engine technologies resulting in cleaner and more efficient fuel burns.
- The cost of fuel and international greenhouse gas (GHG) targets are driving this improvement.
- Geared turbofans (GTF) on the new C-Series, A320 neo, and 737MAX will be even more efficient with respect to air pollution.



Comments

Please provide written public comments before **April 14, 2016** to:

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Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act* (MFOIPPA). With the exception of personal information, all comments will be part of the public record.