



MEMORANDUM

VIA E-MAIL

Date: April 28, 2009  
To: BOS/TAC and CAC Members  
From: Stephen Smith  
Subject: LEVEL 1 SCREENING REPORT (Version 2) ADDENDUM SUMMARY

On March 13, 2009, the Project Consultant (PC) posted the second version of the Level 1 Screening Report which contained changes to the first version dated May 25, 2008. Since posting the report, requests were made at the Mini-Summit meetings for additional info from FAA, Massport, the Independent Consultant (IC) or PC on certain noise abatement measures. Although that info has been sent to the appropriate individuals and captured in meeting notes, CAC leadership requested that FAA/PC prepare an addendum to the Level 1 Screening Report that compiles all of the additional information in one document. If the measure is not listed below, it was not identified as a measure that required additional information. As a result, the determinations made by FAA or Massport as described in Version 2 of the Level 1 Screening Report remain the same.

**Measure G-A: Tow aircraft to runway end before takeoff**

After describing the additional text added in the second version, CAC representatives requested the identification of any airports that currently apply towing of departures to the runway end. The IC researched the matter, and concluded that there are currently no operators utilizing this technique (Attachment 1). PC also provided a copy of a London Times article describing Virgin Atlantic Airlines' evaluation of towing aircraft to the end of the runway, and their findings (Attachment 2). In summary, Boeing found that towing a fully loaded aircraft put too much stress on the nose landing gear. Therefore, the test program was halted. The FAA's decision to reject this measure based on safety is unchanged.

**Measure G-B: Single-engine taxi on aircraft side away from communities**

FAA summarized their conclusion related to this measure, and cannot require the pilot-in-command to operate under a single-engine operations. CAC representatives requested that Massport encourage airlines to use single-engine taxiing. Massport emphasized that they did send a letter out to airlines encouraging single-engine taxiing when deemed appropriate and safe by the pilot-in-command, which is attached to the second version of the report. Massport clearly stated that they cannot and will not enforce or require a pilot-in-command to operate via single-engine taxiing. The decision to use one engine is solely up to the pilot-in-command, not the FAA, Massport or the airline. The FAA and Massport's decision to reject this measure due to safety is unchanged.



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**Measure G-C: Use Taxiway N for 22R traffic and Centerfield Taxiway for 22L traffic**

CAC representatives requested more information related to the FAA's reasoning for rejecting this measure, which was based on a previous evaluation conducted as part of the Centerfield Taxiway Study. CAC disagreed with such reasoning, and requested that the FAA further document how Measure G-C is the same as what was previously examined in the Centerfield Taxiway Study. The CAC also requested that FAA provide additional information about how the Centerfield Taxiway is being used today, as there was some discussion that the measure could be considered completed. In a memorandum issued to CAC on March 31, 2009, (Attachment 3) the FAA indicated that Alternative 1 evaluated in the Centerfield Taxiway Study is the same procedure described for Measure G-C. In addition,; the current use of the Centerfield Taxiway pertaining to Runway 22R/22L departures is consistent with the assumptions stated for Alternative 1 in the Centerfield Taxiway Study. The FAA decision remains the same, "rejected", based on the premise that this alternative was already evaluated in the Centerfield Taxiway Study.

**Measure F-T: Establish altitude floor to increase altitudes over downtown area for local VFR traffic under BOS Tower control that are not on approach or initial climb.**

In Version 2 of the report FAA reported the FAA Flight Standards District Office findings related to low-flying complaints and their findings of each. CAC representatives requested Massport to investigate their complaint database to quantify how many complaints were received related to helicopter operations. Massport provided the following table. Massport reported that the single caller from Cambridge, who lives less than one mile northwest of Harvard Square, inquired about helicopter operations related to medical and media operations, with complaints about medical flights being more common. The information collected did not change the FAA's decision to reject this measure based on safety concerns related to separation from BOS traffic and feasibility related to ATCT's inability to effectively track low-altitude operations via radar.



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**Total Helicopter Complaints**  
 Received by Massport's Noise Complaint Office  
 January 2008 to March 2009

<b>Town</b>	<b>Number of Callers</b>	<b>Number of Complaints</b>
Arlington	1	1
Ashland	1	1
Beacon Hill	1	2
Brookline	1	1
Brookline	1	1
Cambridge	1	111
Cambridge	1	1
Cambridge	1	1
Dorchester	1	1
East Boston	1	2
East Boston	1	1
East Boston	1	1
East Boston	1	1
East Boston	1	1
East Boston	1	1
Jamaica Plains	1	1
Jamaica Plains	1	1
Jamaica Plains	1	1
Lexington	1	3
Medford	1	1
Milton	1	1
Natick	1	1
Quincy	1	1
Quincy	1	1
Somerville	1	1
South End	1	1
South End	1	1
W Newton	1	1
Winthrop	1	1
Woburn	1	3
Woburn	1	1
	30	146

Source: MPA Noise System



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**Measure F-U: Establish required (adhere to) helicopter routings within downtown area airspace for all users, including hospitals, businesses and media.**

CAC representatives inquired about better educating pilots regarding the voluntary routes and noise-sensitivity to residents. The FAA agreed that such a measure may be feasible, but requested that CAC discuss this and put it to a vote if they wish to recommend this measure to the FAA for evaluation. The decision regarding F-U is unchanged, but a refined measure related to pilot outreach may be introduced later.

**Measure 17: Runways 27/33L Departures: develop departure procedures for fanning.**

It was brought to the attention to the FAA that this measure description was incorrect, and agreed with the error. The description should include both Runway 27 and Runway 33L as listed in the header and originally proposed during Phase 1. The Level 1 Screening Report will be updated to reflect this change. During the Mini-Summit meetings, CAC representatives reiterated their concerns related to the measure and reasoning why the FAA will not remove the measure based on CAC's vote to reject it. Discussion pertaining to goals/objectives and NEPA requirements were discussed. Ultimately, CAC representatives asked the FAA to provide a more refined definition of this measure by showing intended divergent headings. CAC concluded that the group cannot make a more informed decision unless more detail is provided. Presently, the CAC still rejects the measure, but is willing to take another look based on more information. FAA agreed and coordinated with ATCT and TRACON to derive further details. The BOS ATCT and TRACON indicated difficulty in deriving specific divergent headings prior to convening a work group comprising of multiple FAA departments, and by the agreed action item deadline of April 28<sup>th</sup>. There are several variables that need to be assessed to determine viable headings (e.g., obstructions, sector boundaries, impacts on BOS Center, etc.). However, TRACON provided an assumption that subject to obstacle clearance and flight standard departure procedures, aircraft could be assigned a heading that is anywhere within a "pie" defined as 45 degrees from the reciprocal of the final approach course, either side of the runway. This definition covers a large area, and does not provide enough specifics requested by CAC. Barring any safety criteria or goals/objectives that would support the elimination of this measure, the FAA is prepared to convene a working group to provide more definition of this measure as planned for Level 2.

**Measure 21: All Runway Departures: develop departure procedures for fanning**

The FAA noted that this measure description was also incorrect. The description should have all runways as listed in the header and as originally proposed during Phase 1. The intent should read: "Disperse noise in departure areas of runways." The CAC requested more information related to the intent of this measure. Specifically, how do divergent headings from runways that direct traffic over



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the water provide a reduction in noise levels to population located on land? FAA agreed that they will inquire the ATCT as to the intent of this measure, and will provide further details related to conceptual divergent headings from each runway. Based on conversations with ATCT, the intent of this measure was to disperse noise over communities close-in to the airport, or within about 5 miles. The premise of the concept is that aircraft noise and performance has substantially improved since the current noise abatement procedures were implemented. The intent was to investigate whether dispersed heading versus single-heading routes would provide an overall reduction in population exposed to aircraft noise levels based on current fleet mix. CAC also requested more specifics headings related to this measure. The BOS ATCT and TRACON indicated difficulty in deriving specific divergent headings prior to convening a work group comprising of multiple FAA departments, and by the agreed action item deadline of April 28<sup>th</sup>. There are several variables that need to be assessed to determine viable headings (e.g., obstructions, sector boundaries, impacts on BOS Center, etc.). However, TRACON provided an assumption that subject to obstacle clearance and flight standard departure procedures, aircraft could be assigned a heading that is anywhere within a "pie" defined as 45 degrees from the reciprocal of the final approach course, either side of the runway. This definition covers a large area, and does not provide enough specifics requested by CAC. Barring any safety criteria or goals/objectives that would support the elimination of this measure, the FAA is prepared to convene a working group to provide more definition of this measure as planned for Level 2.

As noted at the beginning, all other measures were not discussed during the Mini-Summit meetings. FAA requested CAC leadership to encourage all CAC members to review the second version of the Level 1 Screening Report, and consolidate any further requests for additional information related to the FAA decisions.

cc: 06-06-0376-6.2  
Alan Reed, FAA  
Gail Lattrell, FAA  
Read File

document2



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## Attachment 1

**Email Attachment from Sandra Kunz (CAC) to PC/Massport/FAA  
Date: April 14, 2009**

**From The Times  
March 10, 2008  
Virgin's green idea loses its pulling power  
Ben Webster, Transport Correspondent**

Green Central: [click here](#) to read Times Online's environment blog

It was sold to airline passengers as a bold, green initiative that would save thousands of tonnes of carbon dioxide from their flights.

But Virgin Atlantic has quietly abandoned a plan to tow Boeing 747 jumbo jets to special "starting grids" at the end of runways after the aircraft manufacturer found that pulling the landing gear would seriously weaken it.

Sir Richard Branson, the president of Virgin, has launched a series of green initiatives in the past two years in an attempt to claim the mantle of the most environmentally responsible airline. But an analysis by The Times has found that most are having little, if any, impact on the airline's emissions.

Environmental groups argue that the initiatives are "green-wash", accusing Virgin of promoting them for PR value without making clear that it will be many years before they will begin to deliver environmental benefits.

Virgin claimed that starting grids would save up to two tonnes of CO<sub>2</sub> per flight because aircraft engines would not be started until ten minutes before take-off. It also said that people living near airports would benefit from "much lower noise levels and dramatically cleaner air".

Sir Richard even persuaded Arnold Schwarzenegger, Governor of California, to endorse the plan in 2006. When Virgin started testing in December 2006, it suggested that many of its aircraft would be involved and that airports around the world would swiftly embrace the idea.

Now it admits that the project has been suspended indefinitely, because of the landing-gear problem and because existing facilities at airports could not accommodate the starting grids.

A Virgin spokesman confirmed there had been only six towed departures at three airports: Gatwick, Heathrow and San Francisco. Boeing revealed that it had analysed the results of the trials and found



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that towing an aircraft placed too much stress on the landing gear and reduced its life. A Gatwick spokesman said: "We are not building any starting grids."

Jeff Gazzard, a board member of the Aviation Environment Federation, said: "Virgin is using bogus green initiatives in an attempt to make passengers feel less guilty about flying and persuade regulators to allow the industry to carry on growing at its present unsustainable rate."

The Virgin spokesman said it was wrong to criticise the airline for seeking environmental solutions, claiming its rivals were doing relatively little. He said: "In a few years' time there will be significant change."

With other Virgin initiatives, it was found that only 1 per cent of business-class passengers took up the chance of a Heathrow Express train ticket instead of a chauffeur-driven car. And only 5 per cent of biofuel had been used instead of normal aircraft kerosene in a flight described as creating "the first airline in the world to fly on renewable fuel".

Related Links

- \* Branson calls for hydrogen filling stations
- \* Biofuel aircraft not viable for at least five years

As usual -VA very arrogant and only PR.

Fred is absolutely right - the VA Orlando flight sucks no matter what way you are bound.

Steve, London,

Atleast Virgin are trying to find ways of reducing CO2 emissions, investing in trials to understand the possible implications.

Also if you book in on-line Fred you will not have to stand 3 hours in a queue.

Keith, London, England

"Give Virgin credit". You must be joking, Branson has always been famous for his PR stunts and this is just another one, and "install stronger landing gear"....this means heavier landing gear, less passengers, and greater fuel consumption per passenger mile.

John Paulson, Chester,



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Finally, someone called Branson's bluff on this. It was a absurd idea. Tow tractors are not designed to tow fully loaded aircraft any distance - a factor I am sure Branson was aware of when he promoted this idea to the press.

Valerie, Dallas, Texas

Give Virgin Atlantic the credit for trying an initiative like this. Now that the plan is in the news, maybe Boeing or Airbus will start to install stronger landing gear so that one day, the planes can be towed to the runway.

Khaled Shivji, London,

Shame! This was one of the few (the only?) green ideas that actually made good sense!

Mike Bibby, St Albans, England -not EU

My airline today (and has for years now) routinely only starts one engine for taxi, starting the second engine only 3 minutes prior to takeoff unless the gross weight of the aircraft requires both engines for taxi.

Andrew, Powellville,

Another meaningless ploy by a wealthy corporatist. Has anyone recently tried to book into a Virgin Atlantic flight at Orlando? 3 hours in the queue on average because, according to the check in staff, he's too miserly to employ the right numbers of staff. All the hot air produced in that queue would go to reducing global warming instead of filling Virgin's coffers.

Fred, Orlando, U



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## **Attachment 2**

### **Forwarded Article from PC/FAA to CAC on March 18, 2009**

**From The Times**

**March 10, 2008**

**Virgin's green idea loses its pulling power**

**Ben Webster, Transport Correspondent**

Green Central: [click here](#) to read Times Online's environment blog

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## Attachment 3

**MEMORANDUM**

VIA E-MAIL

Date: March 31, 2009  
To: BLANS PMT, Ralph Dormitzer, Wig Zamore  
From: Stephen Smith [Insert [ORIGINAL SIGNED] or e-signature]  
Subject: Centerfield Taxiway – CAC Measure G-C

During the BLANS PMT Mini-Summit meeting on March 16, 2009, CAC representatives requested the FAA to qualify how the current Centerfield Taxiway (Taxiway M) is being utilized today for Runways 22R and 22L departures. **Figure 1** shows the airport layout depicting the completed and opened sections of Taxiway M. As of October 17, 2008, Taxiway M was completed from Taxiway Q north to Taxiway N. A conference call among FAA BOS Air Traffic Control Tower, FAA Airports, FAA Air Traffic Organization staff, and the Project Consultant was conducted March 19, 2009. The information provided below is a summary of the input provided by FAA related to how the centerfield taxiway is used to date, and applicability of the Centerfield Taxiway Study related to CAC measure G-C. The Level 1 Screening Report will be updated to reflect the additional info on Measure G-C provided in this memorandum.

According to BOS ATCT, Taxiway M is used as expected and documented in the Boston Logan Airside Final Environmental Impact Statement (EIS) and the Centerfield Taxiway Study. Aircraft assigned to Runway 22R are directed via Taxiway N. Long-haul domestic and international aircraft that require a longer runway are assigned Runway 22L. Prior to Taxiway M, long-haul aircraft requiring Runway 22L would be put in the Taxiway N queue in order to get to Runway 22L. With Taxiway M available, BOS ATCT may instruct long-haul flights requiring Runway 22L to cross Runway 4L/22R, and then proceed north on Taxiway M to the approach end of Runway 22L. The use of Taxiway M for such operations will vary based on pilot requests and procedural requirements. This procedure was evaluated extensively in the Centerfield Taxiway Study as Alternative 1. Based on the concept proposed by the CAC (Measure G-C), it appears that the expected use of Taxiway M as described meets their intent as much as practicable.

One element that the study concluded regarding noise levels caused by aircraft queuing at Taxiway N and M is that the noise level seems to be dependent primarily on the length of time the aircraft are waiting. The procedures used by the FAA to manage ground traffic safely and efficiently may also provide more opportunity to reduce the duration of aircraft waiting to depart.





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Additionally, the study found that if the FAA ATCT intentionally attempted to manage a balance of the queues for Runway 22R on Taxiways M and N (in order to limit the number of aircraft lined up on Taxiway N-Alternative 2), the DNL noise levels both east and west of the taxiways increased.

The operational assessment revealed that aircraft waited longer to depart Runway 22R because of the additional time necessary to taxi aircraft across the primary departure runway to join Taxiway M along with the time taken for each aircraft to depart due to the single turbojet departure noise abatement heading. Queue duration increased by as much as 17%. Even if FAA ATCT kept the queue length shorter on Taxiway N, the introduction of an additional queue on Taxiway M increased the duration of noise levels for communities east and west of these taxiways. Attachment E of the Centerfield Taxiway Study, Appendix D, *Computed Partial DNL Values by Taxiway Position*, provides an excellent graphical depiction of the change in DNL between Alternative 1 and Alternative 2 at three monitoring site locations. A copy of Appendix D is provided in Attachment A of this memorandum. Therefore, one can reasonably conclude that the means in which the FAA ATCT utilizes Taxiway M for Runway 22L departures may provide the increased potential for a reduction in queue duration compared to conditions prior to the construction of Taxiway M.

Other uses of Taxiway M for aircraft departing Runways 22L and 22R may include operations such as aircraft that are waiting in the queue on Taxiway N, for maintenance or other unforeseen reasons, request to return to the gate. Prior to the construction of Taxiway M, this would require taxiing the aircraft down Runway 22R to get back to the terminal area. With Taxiway M now available, the aircraft may be instructed to taxi south via Taxiway M which accommodates the uninterrupted use of Runway 22R for departure and the continuation of a reduction in the departure queue on Taxiway N. Another example is when Taxiway N is closed due to maintenance, snow removal, etc. In this circumstance, BOS ATCT may instruct Runway 22L and 22R departures to taxi via Taxiway M. The frequency of occurrence for any of the described examples is anticipated to be low when considering average annual day conditions and typical weather conditions. Finally, when departure peak demand conditions (peaks caused by National Airspace System delays, weather, etc.) may potentially contribute to a queue length on Taxiway N beyond Taxiway B, the FAA ATCT may utilize Taxiway M in combination with gate hold practices to ensure the queue for Runway 22R along Taxiway N does not impede on the flow either in or out of the terminal complex.

If members have technical questions, please provide them to us by April 3rd, so that we may coordinate a response with BOS ATCT in advance of the April 8, 2009 Mini-Summit meeting.

Enclosure: Attachment A

cc: 06-06-0376-6.2  
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