

## 7.16.19 Planning Div. Comments on MMC Sound Management Plan (rev 6/19/2019)

### 1. Background:

The *Sound Management Plan* (referred to in this note as the *Plan*) was submitted in December 2018 to address the following condition of approval (from PB in March 2018):

- i. *That within 9 months of the date of this site plan approval the applicant shall submit a "Sound Measurement Plan" for review and approval by the Planning Authority, for assessing the actual changes in sound impacts on nearby properties between the helipad operating at the existing site and at the new location, including criteria for mitigation where such impacts are severe based on appropriate national standards. The "Sound Measurement Plan" is required in the event that the predicted sound levels are incorrect, and it shall be approved and implemented at least 2 months before the helipad is relocated;* Agreed that SMP to be reviewed and approved by time new helipads start to be used; AG confirmed mid-Sept for this and will be seeking separate CO

The City engaged a Peer Reviewer (Principal Consultant at HMMH) to review the submitted *Plan*. The Peer Review comments were given to MMC in March, 2019 and the city requested that the *Plan* be revised to address the Peer Review concerns. The current revised *Plan* was received June 19, 2019 and our review has concluded that it does not address all of the Peer Review comments nor all of the city's specific requests as set out in e-mails dated 11/14/18 and 3/19/19. The comments below summarize the key outstanding issues.

2. Standards of Aircraft Sound: The Peer Reviewer recommended that in the absence of local standards for this unique issue, that the FAA standards regarding environmental impact of helicopter/aircraft sound impacts should be used. The revised *Plan* refers to this but does not quote the standard (relevant to compatibility with residential land use) in full nor include the reference to a 1.5 DNL increase if it brings the level over 65 DNL. Also, it does not provide a summary of the current and predicted (for new location) DNL levels related to the measuring points (see below) in order to see whether the predicted sound levels associated with the relocated and more frequent flights are below or above the FAA standard. AG agreed to include the entirety of this FAA standard and that the delta of 1.5 DBA DNL may be a useful trigger - he would discuss with his consultant.
3. Location of Sound Devices - the *Plan* addresses the Peer Review suggestion to add in a tenth location but does not include the data from this location. See note below in #5.- AG considers this difficult and not helpful
4. Comparison with Historical data: We would note that the *Plan* contains a number of statements about comparability with the 2003 data and measuring locations, and this may be useful in understanding the changes over time. However, as noted in the condition of approval we are focused on getting a baseline regarding current ambient (including current flights) at locations where impacts might be expected, against which to assess predicted and actual change in sound levels which result from the relocation of the pad - which then would provide a basis for sound mitigation where needed. Discussion of term "predicted"- AG interpreting that as a being just mathematical & noted that real flight tests were the basis for their numbers.
5. Helicopter Test Flights: All flights, including for new location 10, should be completed as part of the current study with results included in the *Plan* as a baseline against which evaluation of complaints and monitoring can take place (see below). AG feels suggested location does not add /help & would have to shut down the construction site to do the tests now; JF agreed may not be essential & will discuss further with Peer Reviewer.
6. Continuing Operations: the *Plan* refers to dealing with complaints as per the IDP, so the *Plan* should include the requirements set out in the IDP and then expand on them as per the condition of approval. The *Plan* is intended to augment the IDP to clarify how such complaints would be addressed eg process for making a complaint; criteria for assessing whether a complaint was legitimate; and what forms of mitigation might be appropriate (whether physical mitigation for that property, or modification of the helicopter operations). The Neighborhood Advisory Committee could be identified as one of the ways of clarifying to neighbors how the question of increased helicopter sound would be addressed in the future. AG appreciated the need for this but we all could see that the scientific issues raised by experts (eg about subtracting out ambient sound) was too precise/detailed and we needed a simpler mechanism - see discussion under mitigation. SMP refers to FAA only re above "threshold" as a trigger - could this be clarified to a delta of 1.5 DBA DNL? Other question is what is the baseline for the delta.

7. Sound mitigation/criteria for mitigation: The *Plan* lists properties that would be eligible for physical mitigation though it is unclear how these have been identified. Any reference to specific properties would be based on the predicted sound levels and flight characteristics being correct in actuality. However, as noted in the condition of approval, the *Plan* needs to include a "protocol" for evaluating - based on actual sound levels in this area and other potential areas- what other properties may be eligible for mitigation if future monitoring in the vicinity indicates the FAA standard has been exceeded elsewhere. **ND suggested using a cone of potential impacts rather than specifying addresses. All agreed need to include a statement that if the flight paths are proposed to be changed, further "potential locations of impacts" will be identified.**
8. Assessing actual changes (as noted in the condition): The *Plan* needs to include some form of monitoring going into the future to confirm that the actual sound levels of the relocated and increased frequency of helicopter flights (see below re monitoring) is as predicted. A baseline of current and predicted sound levels needs to be established as the basis for the mitigation "protocol" (mentioned in 7 above) and for assessing the actual sound levels once the new helipad is in operation on a regular basis. The table below was submitted during the review and we would request an updated version of that table to be part of the *Plan* and to include the new measuring point (CP10); the table should be in DNL levels and confirm that the ambient 2017 includes current helicopter flight sounds. **AG to clarify with his consultant what the ambient includes; Accentach may have relevant data that includes existing flights; MMC consultants trying to measure just the sound contribution from helicopters but it may be too complicated. JF may also need to discuss with Peer Reviewer**

In order to simplify the City's review, MMC has directly compared the 2004 study with the 2017 study.

	Ambient Average		Flight Test Average		Change in Sound Level (2003 to 2017)	
	2003	2017	2003	2017	Ambient	Flight Test
CP1	79	84	82	77	5	-5
CP2	79	93	88	88	14	0
CP3	71	92	80	86	21	16
CP4	69	89	79	89	20	10
CP5	83	88	66	66	5	0
CP6	75	79	71	72	4	1
CP7	68	81	71	86	13	15
CP8	78	89	63	63	11	0
CP9	74	92	65	70	18	5

9. Monitoring and triggers for assessing implications of any changes: There are anecdotal observations that helicopters are currently using different flight paths from those confirmed in the IDP, and are operating at a greater frequency than has been advised during the review. The *Plan* should include some mechanism for monitoring both of these flight characteristics as from the start of operations at the new helipad, as these could generate unacceptable new sound levels for the surrounding residential neighborhood, including some properties not previously affected by the helicopters using the former helipad location (see IDP for discussions regarding flight paths).

**AG was aware that a few flights were not following the approved routes and thinks they are flights from Boston - is researching with Jetport/LifeFlight & will follow up\*. SMP to add confirmation that there is no intention to add any flight routes and confirm process if another route needs to be requested/ approved.**

If monitoring confirms that new flight paths over residential areas are being utilized and/or that the frequency of flights is greater than predicted, there needs to be a point identified which, if reached, would trigger a review of the helicopter operations to be undertaken in consultation with Life Flight and the city. This possibility should be acknowledged and addressed in the *Plan*.

**JF and ND confirmed that the City would not wish to be involved in the process of implementing mitigation work such as soundproofing etc. AG agreed to remove these references (they had been lifted from CZA of 2005)**

JF& ND/7.16.19

**\* Nell noted IDP referred to "exception reports" having to be logged by pilots and suggested that data on these could be investigated.**