



NMT Review Results



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Toronto Pearson
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NMT Working Group

1. Established NMT Working Group

CENAC:	Councillor Chris Fonseca, Brian Maltby, Tina Rizzuto-Wilan, Craig Van Spall, Johann Van 'T Hof
GTAA :	Cynthia Woods
Acousticians:	Colin Novak and Helen Ule

2. Updated NMT selection criteria

3. Identified sites for temporary noise monitoring

4. Assessed Results

3. Developed Recommendation

NMT Site Location Assessment

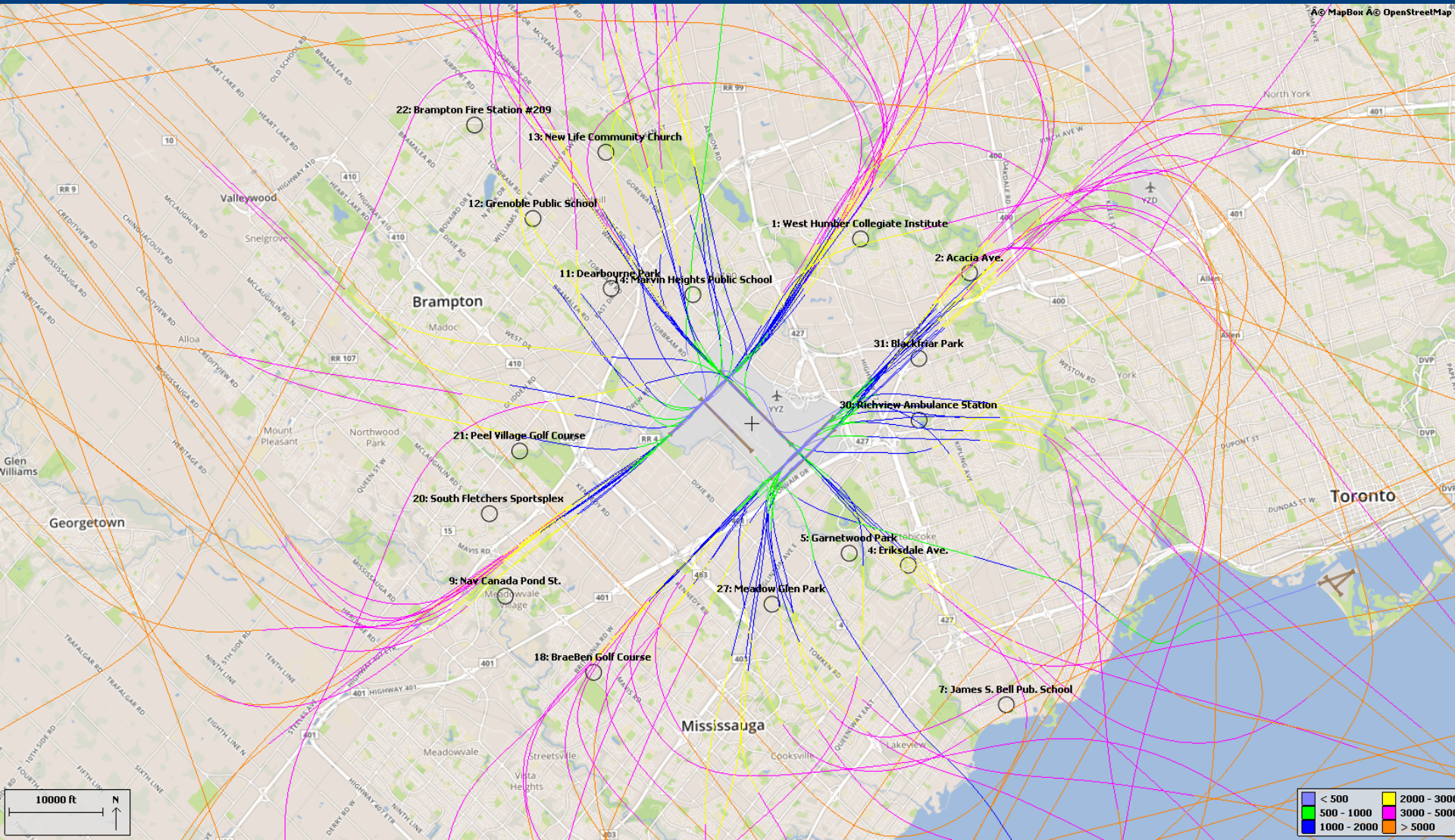
Analysis of Existing and Potential NMT Site Locations

Approach:

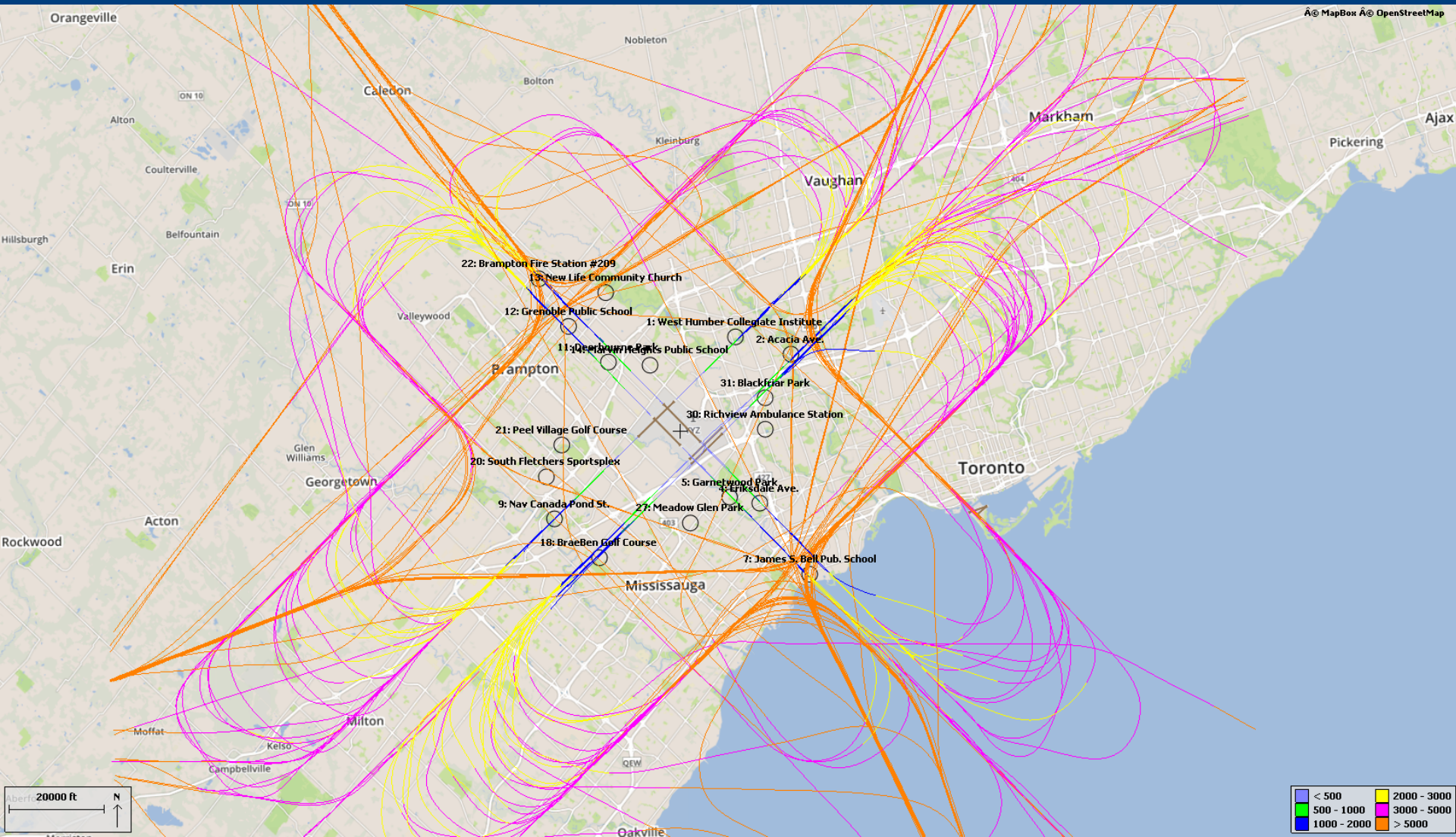
- NMTs vs operations and NMTs vs complaint locations

Conclusions:

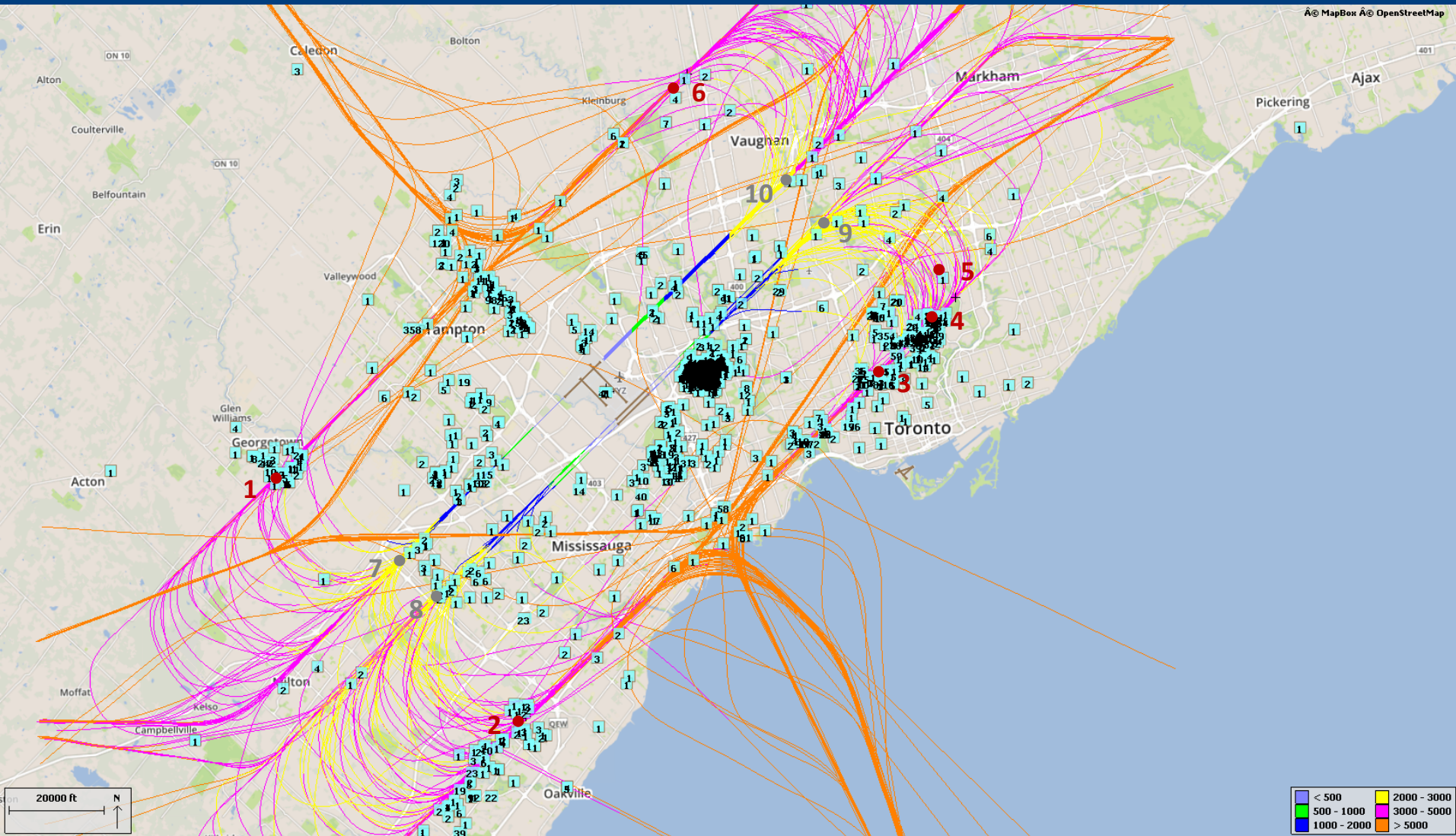
- Departure traffic and arrivals on final approach captured by current distribution
- Identified 10 areas for temporary noise monitoring to capture arrival traffic on downwind



Arrivals All Runways



Areas for Temporary Noise Monitoring



Temporary Noise Monitoring Sites Legend

- Identified at initial meeting
- Additional sites

Noise Metrics - Definitions

Noise Event:	Confirmed aircraft flyover from time of first audible until time of no longer audible
Ambient:	Background noise level before and/or after a noise event
Lamax:	Maximum A-weighted sound level measured during confirmed aircraft flyover
LAmax Max:	Highest LAmax measured at each site
LAmax Min:	Lowest LAmax measured at each site
Lamax Med:	Median of measured LAmax at each site
Lamin:	Minimum A-weighted sound level measured during confirmed aircraft flyover
LAmin Max:	Highest LAmin measured at each site
Lamin Min:	Lowest LAmin measured at each site
Lamin Med:	Median LAmin measured at each site
LAmaxMed/LAminMed	
Differential :	Good indicator of location noise impact from aircraft flyover

Arrival Data for All sites

Pos	Address	LAmox			LAmin			Differential	Movements & Altitudes		Complaints	
		Max	Min	Med	Max	Min	Med	LAMax Med LAMin Med	Traffic	Avg Alt (AGL)	Comp	Callers
1	Craig Cres. Halton Hills	77	44	62	52	32	45	17	20,399	4,175	588	35
2	Parkmount Blvd. Oakville	78	45	61	61	35	47	14	19,377	3,925	3,471	208
3	Warren Rd. Toronto	81	50	63	55	41	46	17	47,815	4,440	666	22
4	Cameron Cres. Toronto	70	44	60	55	39	45	15	41,093	4,016	8,667	51
5	Barrydale Cres, Toronto (North York)	72	43	57	49	35	42	15	8,808	3,304	163	6
6	Via Campanile, Vaughan	71	49	61	58	37	50	11	25,620	4,502	12	8
7	Raindance Cres, Mississauga	73	45	65	58	40	47	18	45,758	2,626	1	1
8	Saltmarsh Crt, Mississauga	70	45	63	55	44	45	18	26,531	2,602	569	29
9	Henry Welsh Dr., Toronto (North York)	76	43	62	59	39	47	15	71,422	2,869	21	10
10	Keefer Crt, Thornhill	77	43	61	63	39	51	10	37,766	3,425	4	3



Locations within close proximity

* LAMax Med/LAMin Med - Differential

Scoring Matrix

Site	Address	Differential	Diff/Max	ColB*weight (5)	Movements	Mvmnt/ Max	ColF*weight (4)	LAMax Med	LAMax/ Max	Coll* Weight (3)	Callers	Callers/ Max	Coll* Weight (3)	SUM	Rank
1	Craig Cres. Halton Hills	17	0.94	4.72	20399	0.29	1.14	62	0.95	2.86	35	0.17	0.50	9.23	6
2	Parkmount Blvd. Oakville	14	0.78	3.89	19377	0.27	1.09	61	0.94	2.82	208	1.00	3.00	10.79	3
3	Warren Rd. Toronto	17	0.94	4.72	47815	0.67	2.68	63	0.97	2.91	79	0.38	1.14	11.45	1
4	Cameron Cres. Toronto	15	0.83	4.17	41,093	0.58	2.30	60	0.92	2.77	79	0.38	1.14	10.38	N/A
5	Barrydale Cres, Toronto (North York)	15	0.83	4.17	8,808	0.12	0.49	57	0.88	2.63	79	0.38	1.14	8.43	N/A
6	Via Campanile, Vaughan	11	0.61	3.06	25620	0.36	1.43	61	0.94	2.82	8	0.04	0.12	7.42	8
7	Raindance Cres, Mississauga	18	1.00	5.00	45758	0.64	2.56	65	1.00	3.00	1	0.00	0.01	10.58	4
8	Saltmarsh Crt, Mississauga	18	1.00	5.00	26531	0.37	1.49	63	0.97	2.91	29	0.14	0.42	9.81	5
9	Henry Welsh Dr., Toronto (North York)	15	0.83	4.17	71422	1.00	4.00	62	0.95	2.86	10	0.05	0.14	11.17	2
10	Keefer Crt, Thornhill	10	0.56	2.78	37766	0.53	2.12	61	0.94	2.82	3	0.01	0.04	7.75	7



Locations within close proximity
(caller numbers combine to assess as
one site)

Ranking by Score

Position Site	Location	Rank
3	Warren Rd. Toronto	1
9	Henry Walsh Rd, Toronto (North York)	2
2	Parkmount Blvd, Oakville	3
7	Raindance Cres, Mississauga	4
8	Saltmarsh Crt, Mississauga	5
1	Craig Cres, Halton Hills	6
10	Keefer Crt, Thornhill	7
6	Via Campanile, Vaughan	8

Position 3 was attained the highest score of the three within close proximity to one another (pos 3, 4 and 5). Position 3 was therefore selected to represent the area.

NMT Selection Criteria Update

- **Current NMT site selection document is for sites within 8 nautical miles from the airport**
 - The intent is to capture noise levels for aircraft immediately after departure and on final approach
- **In response to community interest, there is a desire to expand the scope of potential monitoring sites outside the present criteria**
- **To be able to address this, a revised site selection criteria is recommended, some possible criteria include:**
 - Increase maximum nautical mile distance from airport
 - Collect statistically significant amount of noise data to support adverse impacts
 - Recommend minimum L_{Amax}-L_{Amin} deviation from aircraft impacts
 - Increase maximum altitude from 6000 feet ASL.
 - Set minimum annual traffic volumes
 - Update minimum distance from existing NMT(s)

Next Steps

1. Site Selection

- **Background Noise Level:** background noise levels at potential sites should be relatively low to improve the accuracy of correlating aircraft noise events.
- **Utility Sources, Site Access and Security:** hydro services available, easily accessible for maintenance, secured area or an area that is well exposed to observation by the public to avoid vandalism or theft.
- **Terrain and Building Interference:** a direct line of sight (sound) to the area of the sky where aircraft normally fly, no large buildings or other large solid surfaces nearby to avoid sound reflections, no nearby trees or other sources of wind induced noise

2. Lease Agreements

- Work with municipalities and/or school boards for each site to arrange lease prior to installation

3. Order Equipment

- Place order for NMT equipment with vendor

4. Installation/Integration

- Acoustician installs NMTs
- Vendor integrates with Airport Noise & Operations System (ANOMS) and WebTrak

Toronto Pearson

Your Airport. *And* Your Neighbour