CITATION: CCLA v. Toronto Police Service, 2010 ONSC 3525
COURT FILE NO.: CV-10-404640
DATE: 20100625

SUPERIOR COURT OF JUSTICE - ONTARIO

RE: Corporation of the Canadian Civil Liberties Association, the Canadian Labour Congress, Abby Deshman and Nathalie Des Rosiers, Applicants

AND:

Toronto Police Service and Ontario Provincial Police, Respondents

BEFORE: D. M. Brown J.

COUNSEL: P. Cavalluzzo, M. Wright and A. Telford, for the Applicants

D. Smith, for the Toronto Police Service

C. Diana, for the Ontario Provincial Police

HEARD: June 23, 2010

REASONS FOR DECISION

I. Overview

[1] Long Range Acoustical Devices ("LRAD"), colloquially described by the media as sound or sonic cannons, operate in two ways: in their "Voice" mode as a powerful loudspeaker or megaphone and, in their "Alert" mode, as the emitter of a high decibel, narrow frequency, focused set of sound waves. The Toronto Police Service ("TPS") recently purchased four LRADs – three body-pack ones, and one mounted on a boat. A few weeks ago the Ontario Provincial Police ("OPP") bought three LRADs – one body pack style and two tripod-mounted models.

[2] The G8 Summit started today in Huntsville, Ontario. Later tomorrow the world's leaders and their finance ministers will convene in Toronto for the G20 Summit. Public protests have been organized in Toronto for the next three days in conjunction with the G20 Summit.

[3] The applicants, the Corporation of the Canadian Civil Liberties Association ("CCLA"), its Project Director, Abby Deshman, its General Counsel, Nathalie Des Rosiers, and the Canadian Labour Congress ("CLC"), commenced an application on June 9, 2010, seeking a variety of relief to limit the respondents' use of LRADs both generally and during the G20 Summit. Within that application they have moved for the following interlocutory relief:

1. An order granting an interlocutory injunction restraining the Respondents, their respective agents, employees and persons acting under their instructions, or instructions of either of them, from using the "alert" function on sonic cannons and the "communications" function at a sound level above that prescribed by Ontario occupational health and safety legislation without prior approval of the Solicitor General pursuant to Regulation 926 of the *Police Services Act* and then only in strict compliance with Regulation 926 of the *Police Services Act.*

2. An order granting an interlocutory injunction restraining the Respondents, their respective agents, employees and persons acting under their instructions, or instructions of any of them, from using the "alert" function on sonic cannons and the "communications" function at a sound level above that prescribed by Ontario occupational health and safety legislation in policing and/or providing security before and during the 2010 G-20 Summit.

3. An order granting an interlocutory injunction restraining the Respondents, their respective agents, employees and persons acting under their instructions, or instructions of any of them, from using the "alert" function on sonic cannons and the "communications" function at a sound level above that prescribed by Ontario occupational health and safety legislation pending the disposition of the Rule 14 Application in this matter.

[4] For the reasons set out below, I dismiss the motion against the Ontario Provincial Police, and I grant a limited injunction against the Toronto Police Service, but on terms.

II. The parties and their interests

[5] The CCLA was founded in 1964 to protect and promote respect for, and observance of, fundamental human rights and civil liberties. It has several thousand paid supporters. Over the years the CCLA has participated in numerous court cases in Canada involving human rights and civil liberties issues.

[6] Abby Deshman is the Director of the Fundamental Freedoms Project with the CCLA. She is organizing a team of volunteer human rights monitors to attend the marches and rallies during and around the Summits. Monitors intend to observe police conduct to ensure that the civil liberties and human rights of participants at public rallies and demonstrations are respected. Nathalie Des Rosiers is the General Counsel of the CCLA.

[7] The CLC operates as the umbrella organization for dozens of affiliated Canadian and international unions, as well as provincial federations of labour and regional labour councils, covering more than 3 million affiliated workers. Its major objectives are to work towards decent wages, healthy and safe workplaces, fair labour laws, equality rights, dignity in retirement, a sustainable environment and respect for basic human rights here in Canada and around the World.

[8] The Toronto Police Service is the municipal police force for Toronto; the Ontario Provincial Police acts as the police force in many communities in the province and, in larger urban areas, bears responsibility for policing some of the major expressways.

III. The G8 and G20 Summits

A. Responsibility for security arrangements

[9] Leaders of eight of the world's most industrialized countries are holding a two-day summit in Huntsville, Ontario, about three hours north of Toronto. The G8 Summit started today, Friday, June 25, 2010, and will conclude tomorrow. At that time several of those leaders, together with additional government leaders, finance ministers and central bank governors from 20 countries, will begin a series of meetings in downtown Toronto to discuss economic issues. Those meetings will conclude on Sunday, June 27.

[10] Security for the Summits is being managed by the Integrated Security Unit, a joint security team led by the Royal Canadian Mounted Police ("RCMP") in partnership with the TPS, the OPP, the Canadian Forces, and Peel Regional Police. The RCMP bears primary responsibility for the security inside the perimeter fences erected for the G8 and G20 Summits. The OPP will police areas in Huntsville and environs outside the fenced security perimeter. The TPS will have primary responsibility for security at the G20 Summit in Toronto outside of the security fence erected around the area in downtown Toronto where the G20 participants will meet. The OPP will police provincial highways, participate in motorcades, and may assist the TPS on other matters, if requested.

[11] Given the concentration of world leaders in one place, and their discussion of significant issues of concern to people, demonstrations, rallies and protests generally accompany the holding of the G8 and G20 Summits. Indeed the applicants emphasize in their materials that the G20 Summit presents a unique opportunity for people to demonstrate in support of or against government policies.

[12] OPP Superintendent Tim Charlebois outlined in his affidavit the nature of the security threats anticipated by the OPP during the G8 and G20 Summits, as well as that force's view on the exercise by people of the fundamental freedoms of expression, peaceful assembly and association guaranteed by the *Canadian Charter of Rights and Freedoms*:

> [8] I am aware that past international summits have seen significant public disorder, lawlessness, personal injury and property damage. Policing such events to prevent violence from causing damage of that nature is a significant challenge. Stringent security measures are required to keep the peace, ensure public safety and keep the participants of protests safe from harm.
>
> [9] While I am not an expert on international terrorism, I am aware that events of this magnitude that involve so many world leaders and diplomats pose a tempting target for terrorists. Such events also provide an opportunity for violent groups or individuals to engage in illegal activities. The methods used by violent groups or individuals can result in significant risk of injury or property damage. Their methods can include the use of

> incendiary devices, hand-held batons or sticks, rock-throwing or mass movement towards or charging police lines or fences. They may also seek to breach security perimeters by climbing fences or scaling buildings.
>
> [10] The OPP recognizes the constitutional rights of protesters to freedom of expression and freedom of association. The OPP recognizes that events of the magnitude of the G20 Summit provide an opportunity for groups and individuals to communicate their messages to a larger audience. The great majority of those groups and individuals are peaceful and respect the law. Unfortunately, there are small numbers of individuals who use violence and engage in criminal behaviour. The OPP makes best efforts to try to focus its attention on those individuals, but the presence of those individuals may necessarily affect the manner of policing a larger crowd.

IV. Planned marches, rallies and demonstrations

[13] The CLC is co-sponsoring a G8 and G20 Public Rally and March tomorrow afternoon, Saturday, June 26, 2010, together with Oxfam, Greenpeace, the Council of Canadians, and the Ontario Federation of Labour. Mr. Chris MacDonald, CLC's Ontario Regional Director who is in charge of organizing the rally and march, deposed that the CLC had discussed its rally and march with the TPS. The event will start with a 45 minute rally at Queen's Park, in Toronto, followed by a march through downtown Toronto, going south down University Avenue, then west along Queen Street to Spadina Avenue, back north along Spadina to College Street, then east back to Queen's Park where there will be a stage and entertainment.

[14] According to Mr. Kenneth Georgetti, President of the CLC, the Congress initially estimated that up to 30,000 people would attend its rally and march. Mr. MacDonald deposed, however, that "people from various communities have expressed concerns to me about their and their children's safety that day", and that CLC event organizers have reported to him "that it is difficult to convince people that they will be safe on the day of the march." He continued:

> [9] These worries and fears about safety make it very difficult for us to mobilize community groups to participate. Several individuals have expressed their concerns about suffering permanent hearing loss from the sound cannons to me. We are encouraging families to attend, but people are reluctant to bring their children when there is the risk of permanent damage to their children's hearing.
>
> [10] As a result of these chilling effects, our estimated numbers are much lower than we initially hoped for. This makes it very difficult to properly predict the logistical needs of the march.

[15] Mr. Mark Calzavara, a regional organizer for the Council of Canadians, stated this his organization has been involved in organizing a People's Summit held in Toronto from June 18 to 20, a "Shout Out for Global Justice" forum scheduled for today, as well as tomorrow's Public Rally and March.

V. How LRADs work

[16] LRADs are dual function devices. Each LRAD has two settings – Voice and Alert. The Voice function operates like a megaphone. The Alert function emits a high-pitched sound. When operating in both functions the device focuses sound into a relatively narrow beam, or cone, of approximately 15 degrees. The Alert, or warning signal, is emitted at one frequency, or along a narrow frequency range.

[17] The device's manufacturer, the LRAD Corporation, makes available five different sized models. From smallest to largest they are LRAD models 100X, 300X, 500X, 1000/1000X and the LRAD-RX remote device.

[18] The TPS and OPP have purchased the two smallest models – the 100X and 300X.

[19] The level of sound emitted from LRADs is measured in decibels, the readings of which can be reported as "dBA" or as "dB SPL". The "A rating" tries to simulate what an average human may hear, rejecting some low frequency sounds which might not make it through to the auditory system. SPL measures sound pressure level which is a physical measurement of sound pressure. At a frequency of 1,000 HZ, SPL and A ratings will be similar. "A" ratings at lower or higher frequencies than 1,000 HZ will generally show slightly higher decibel readings than SPL.

[20] According to the manufacturer's product sheet for the LRAD 100X, the model is "10 - 21 decibels (dB) louder than the most competitive megaphones." The maximum continuous output from the LRAD 100X at a distance of one metre is 136 dB sound pressure ("SPL"). The manufacturer's literature for the 300X model states that its maximum continuous output is 142 dB SPL at one meter. By contrast, the larger models are capable of producing 148 dB SPL (the LRAD 500X and 1000) and 152 dB SPL at one metre away (the LRAD RX).

VI. The levels of sound emitted by LRADs

[21] The OPP filed the results of two tests measuring the levels of sound produced by their LRAD 100X and 300X models. Both tests were conducted in an open, rural area (the Deerhurst air strip), on sunny days with light winds. As a result, I did not have before me any results from tests conducted in an urban environment, such as downtown Toronto, where the LRADs most likely would be used for crowd communication or control.

[22] The OPP field tested its LRADs on June 11 and 15, 2010. The force then retained Mr. Tim Kelsall, an acoustician with the consulting engineering firm, Hatch Associates Ltd., to run his own tests on June 17, 2010.

A. Results of the OPP Tests of LRADs

[23] I have set out in two tables below the reported results of the OPP field tests of the LRAD 100X and 300X models in both their Voice and Alert functions.

Voice function results

[24] The results of the Voice function tests were as follows:

Model	Level	10m (dB)	25m (dB)	50m (dB)	75m (dB)	100m (dB)
100X	Max Voice	Not tested	Not tested	79.4/81.7	77.0	66.4/76.5
300X	Max Voice	Not tested	97.9 (22m)	91.5/92.6	94.9	96.7/88.5

Alert function

[25] Each LRAD has a colour-coded volume control, moving from green at the lower volume levels, through yellow and red to the maximum volume. The results of the OPP tests of the decibel levels produced by their LRADs on the Alert function were as follows:

Model	Level	10m (dB)	25m (dB)	50m (dB)	75m (dB)	100m (dB)
100X	Mid Green	Nil	Nil	Nil	Nil	Nil
	Green/Yellow	78.7/83.7	76.9	Nil	Nil	Nil
	Half	86.9/98.5	72.8/86.2	62.8/80.8	70.2	55.4/69.8
	Yellow/Red	94.5/100.1	83.8/95.1	78.1/84.8	84.3	64.7/86.3
	Max	106.6/112.1	94.1/105.8	93.1/98.3	95.5	72.4/94.3
		10m	**22m**	**50m**	**75m**	**100m**
300X	Mid Green	Nil	93/96.6	86.7/87.5	87.1	83.9/82.3
	Green/Yellow	Nil	99.3/99.5	89.8/92.1	88.9	86.9/87.2
	Half	Nil	101.5/103.5	94.4/94.4	94.1	89.5/90.4
	Yellow/Red	Nil	105/106.8	97.5/98.6	94.5	99.3/94.2
	Max	Nil	112.1/111.2	101.4/103.9	98.9	101.9/97.4

[26] The TPS Guidelines for LRAD use acknowledge that the devices have "the capability to emit acoustic sound pressure levels in excess of accepted [*Occupational Health and Safety Act*] noise hazard levels" on the Alert function.

B. Hatch Associates test: June 17, 2010

[27] Mr. Tim Kelsall is an acoustician, and the Director of Noise and Vibration at Hatch Associates Ltd. In his report he described noise measurements he took from the LRAD 100X and 300X models on June 17, 2010, at the Deerhurst Air Strip. He took measurements at several distances and angles. He opined that his results compared well to the measurements taken earlier by the OPP in several cases, although the OPP meter was not A-weighted. I have summarized his results in the following two tables:

MODEL 100X:

Model	Distance (m)	LRAD volume setting	dBA
100X	10	Voice: green centre	68
	10	Voice: yellow centre	77
	10	Voice: yellow red	85
	10	Voice: red centre	93-94
	10	Alert: green centre	87
	10	Alert: yellow centre	96
	10	Alert: yellow red	104 – 105
	10	Alert: red centre	111
	75	Voice max: Alert max:	80-81 95-96
	80	Voice max: Alert max:	80-81 93.5-94
	100	Voice max: Alert max:	76-80 91-94

MODEL 300X:

Model	Distance (m)	Beam	Sound level	dBA
300X	22	Narrow Beam	Voice max: Alert max:	101-102 115-118
	22	Wide Band	Voice max: Alert max:	101-104 115-116
	50	Narrow Beam	Voice max: Alert max:	92-94 105-108
	50	Wide Band	Voice max: Alert max:	93-94 104-107
	75	Narrow Beam	Voice max: Alert max:	92 101-102
	75	Wide Band	Voice max: Alert max:	93-95 103-106
	80	Narrow Beam	Voice max: Alert max:	92-93 104
	80	Wide Band	Voice max: Alert max:	91-93 102-107
	100	Narrow Beam	Voice max: Alert max:	86-92 105-106
	100	Wide Band	Voice max: Alert max:	87-90 102

[28] Unfortunately, the evidence did not explain the difference between the narrow beam and wide band measurements taken from the 300X model.

[29] In his report Mr. Kelsall noted that measurements taken in a city setting out to 100m could in some cases be typically 3 to 6 dB higher due to building reflections. On cross-examination he stated that the frequency of the sound emitted on the Alert function was in the range of 2 to 4 kilohertz, while the frequency of the Voice function sound was more variable: one to four kilohertz.

[30] Mr. Kelsall was asked to estimate the noise exposure of a crowd to an LRAD during a typical day's use. His report set out his assumptions, which included: (i) 40 seconds per police message; (ii) 30 voice messages per incident; (iii) 10 alerts per incident; (iv) 5 seconds per alert;

(v) one incident per day for the crowd; (vi) 94 dBA as the sound level received by the crowd from Voice use; and (vii) 110 dBA as the sound level received by the crowd from Alert use. Based on those assumptions Mr. Kelsall opined:

> Based on these assumptions and on assumed sound levels, the Lex,8h[1] noise exposure of both the crowd and the operators has been estimated. The results give exposures of 84.4 dBA for the crowd and 86.2 dBA for the operators. Thus the estimated noise exposure of the most exposed people in the crowd would be below the daily exposure mandated for workers in Ontario. Even if someone were a little over, a day or two of quiet would restore their average exposure below this limit. For example, doubling the time of exposure would increase the Lex,8h by 3 dB but the average over that day and a day of quiet would still meet the 85 dBA limit. Wearing hearing protection or even putting their fingers in their ears would also significantly reduce their noise exposure.

[31] Mr. Kelsall concluded his report by noting that the time available for his study had been short:

> It is recommended that the noise exposure of this equipment be properly studied and the standard operating procedures adjusted as required. The records kept by the operators during the G8 and G20 summits would be invaluable for such a study.

[32] He also acknowledged on his cross-examination that it would have been nice to have had a longer time to take measurements and run a computer model of how the sound would propagate down a city street. That said, he was comfortable with his conclusions, and he was not concerned about hearing loss for members of the public if the OPP and TPS stuck to their standard operating procedures.

C. Evidence of Dr. Harrison

[33] Dr. Robert Harrison is a research scientist at the Hospital for Sick Children in Toronto and a full professor in the Department of Otolaryngology at the University of Toronto. His work has focused on the damage to the human ear by various agents.

[34] Dr. Harrison has not studied LRADs in operation. The views he expressed were based on the literature about the devices published by its manufacturer. In his affidavit filed by the applicants Dr. Harrison commented on the potential effects on hearing from LRADs:

(i) Based on the maximum levels of sound produced (i.e. measured at one metre), any of the LRADs are capable of producing sound that could cause hearing loss;

(ii) He had not been able to find any scientific papers that specifically tested the effects of LRADs;

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[1] According to the Industrial Establishments regulation (R.R.O. 1990, Regulation 851) made under the *Occupational Health and Safety Act*, $L_{ex,8}$ is the equivalent sound exposure level in 8 hours.

(iii) Hearing damage can occur at 90 decibel sound pressure level where the exposure is over 30 minutes; 100 decibel sound pressure can cause hearing damage in about 15 minutes; at 120 decibel sound pressure hearing damage can occur in a matter of seconds;

(iv) Painfully loud sounds occur around 125 decibel sound pressure: "Physiologically, pain is a sign of the body of a damaging insult. If one feels pain from very loud sounds, then those sounds are at a level that can cause injury to cochlear hair cells, and sensorineural hearing loss";

(v) LRAD devices are effective in part because they focus sound into a beam, or a cone of a 10-15 degree angle: "In the open this means that the acoustic signal can be directed towards 'people of interest'";

(vi) Based on the technical specifications of LRADs, they are all capable of producing painfully loud sound at 1 metre away. Even much further away, however, they can still inflict pain, and can cause cochlear injury and hearing loss;

(vii) The smallest LRAD at 16 metres is capable of producing painfully loud sound which is a sign of potential damage or injury. An intermediate LRAD which produces 142 decibel sound pressure at 1 metre is capable of causing hearing damage at 100 metres away;

(viii) The LRAD's tonal "alert" signal "is a high intensity signal at one frequency (or very narrow-band) and this signal is most damaging to the inner ear…The single frequency focuses the energy at a single part of the inner ear";

(ix) "The manufacturer markets the alert tone function as useful for crowd control. This function is more damaging than the loudspeaker function because it can cause localized damage."

[35] On cross-examination Dr. Harrison stated that the higher frequency Alert beams would be more directional than the lower frequency Voice sounds. He noted the paucity of literature about the actual directionality of sound emanating from LRADs and the fall off of sound intensity outside the cone. He also stated that the frequency-specific tonal, or Alert signal, of LRADs would be more damaging to the ear than a broadband signal containing many frequency components.

[36] Dr. Harrison deposed that the concentrated cone of sound waves produced by a LRAD "is problematic when used on crowds in an urban setting because the high intensity sound beam will reflect off of walls or other solid structures. Such an acoustic signal is difficult if not impossible to control under these circumstances. Bystanders to a 'problem group' will clearly be in danger." Dr. Harrison acknowledged that he had no idea about the distances the OPP and TPS proposed for the use of LRADs under their standard operating procedures.

D. Evidence of Marshall Chasin

[37] Marshall Chasin, an audiologist who filed an affidavit at the request of the applicants, prepared a note which described the mechanics of hearing loss in general terms. Mr. Chasin, however, had no personal experience in analyzing the sounds produced by LRADs. I did not find his note helpful in determining the potential impact of the operation of a LRAD on a demonstrator.

E. Evidence of effect on a protestor

[38] The only evidence before me recounting a person's actual experience with a LRAD was hearsay – a May 27, 2010 Toronto Star article submitted by the applicants in which a protestor at the 2009 Pittsburgh G8 Summit, Albert Petrarca, described the sounds from a LRAD as "like a root canal":

> "It moves from side to side," he recalled Thursday of a directional, sonic crowd-dispersal tool introduced at the last summit conference.
>
> "When the (sound) beam moves away from you, it's annoying background noise," he said. "When it's directed at you it's noxious."

F. Workplace noise level regulations

[39] The Canada *Occupational Health and Safety Regulation*[2] and regulations made under the Ontario *Occupational Health and Safety Act*[3] stipulate the maximum duration of exposure to A-weighted sound pressure levels in the work place. Although demonstrations on public streets are not "workplaces" and therefore not subject to the limits prescribed by both regulations – either in the sound generated by protestors or that by the police - the table below reproduces selected prescribed levels and durations and, I think, serves as a useful guide to understanding the impact of various sound levels:

A-weighted sound pressure level (dBA)[4]	**Canadian Regulation** **Maximum duration of exposure in hours per employee per 24 hour period**	**Ontario Regulation** **Minutes of exposure allowed per day**
87	8.0	302.9

[2] S.O.R./86-304, Schedule for section 7.4

[3] Regulations 851 and 855 made under the *OHSA*.

[4] According to Mr. Kelsall, the A-weighted sound in decibels (dBA) helps a sound level meter to more closely represent the frequency response of human hearing and is almost universally used for community and occupational noise measurements.

90	4.0	151.8
93	2.0	76.1
96	1.0	38.1
99	0.5 (30 minutes)	19.1
100	0.4 (24 minutes)	15.2
105	0.13 (7.8 minutes)	4.8
110	0.04 (2.4 minutes)	1.5
112	0.025 (1.5 minutes)	1.0
115	0.013 (0.78 minutes, or 47 seconds)	0.5 (30 seconds)
117	0.008 (0.48 minutes, or 29 seconds)	0.3 (18 seconds)
120	0.004 (0.24 minutes, or 14 seconds)	0.2 (12 seconds)

G. Other noise levels

[40] The respondents filed evidence about the noise levels associated with other devices used by the police or other circumstances oft-encountered. For example, a standard police siren generates 97.2 decibels from 10 metres.[5] In his report Mr. Kelsall gave examples of the sound levels of various household items, measured at the distance a person typically would be from the source:

Device	**dBA**
Grand Canyon at night	10
Microwave	55-59
Normal Conversation	55-65
Hairdryer	80-95
Lawn Mower	88-94

[5] McGuire Affidavit, para. 38.

¼ inch drill	92-95
Food Processor	93-100
Weed Whacker	94-96
Circular Saw	100-104

[41] On his cross-examination Dr. Chasin indicated that sound levels at a construction site in downtown Toronto could exceed 100 decibels and a fire engine as it roars past (without the siren on) would generate in the range of 90 to 100 dbA.

VII. Prior use of LRADs

[42] David Wood, a Professor of Sociology at Queen's University, Kingston, Ontario, who specializes in surveillance studies, filed an affidavit in support of the motion. Although Professor Wood provided some general background information about the origins of LRADs, his evidence suffered from a failure to identify and attach source documents to support the statements which he made. That said, from his general evidence, and that of Ms. Des Rosiers, it appears that LRADs originally were manufactured for the military, primarily as maritime weapons used in the Somali Gulf against pirates. The LRAD Corporation markets various models of the devices for civilian and military use. LRADs have been used by Japanese whalers to repel anti-whaling activists.

[43] Professor Wood deposed that to his knowledge LRADs had only been used once before in an urban setting in North America, specifically by police in Pittsburgh, Pennsylvania, in September, 2009, during a demonstration held in anticipation of the G8 Summit. In his affidavit Professor Wood deposed:

> Media reports and videos posted on the Internet, however, showed that the [Pittsburgh] police, contrary to their training operated the LRAD, that is, directed piercing and intolerable sound towards activists, for several minutes at a time rather than two to four seconds.

Unfortunately, Professor Wood did not attach any of those media reports or videos as exhibits to his affidavit. As a result, I cannot attach any weight to his statements.

VIII. The acquisition of LRADs by the respondents

[44] In May of this year the TPS purchased four LRADs – two 100X models for the Public Safety Unit, one 100X model for the Emergency Task Force, and one 300X for the Marine Unit. All models possess the Alert function. Two officers operate the 100X model – one carries the device and the other controls the Voice, Alert and volume functions.

[45] The Toronto Police Services Board did not review the purchase of the LRADs.

[46] The OPP has purchased three LRADs – one 100X model, and two 300X models which are tripod-mounted – and took delivery of them a few weeks ago. According to Superintendent Charlebois, the OPP intends to use LRADs for the following purposes - public order operations; search and rescue operations; tactical operations, including barricaded persons; hostage situations; and, high-risk warrant execution and chemical, biological, radiological and nuclear operations. The OPP regards LRADs as "advanced communication tools".

[47] Neither police force sought the consent of the Solicitor General before acquiring their LRADs because they viewed the devices as communications tools, not weapons requiring such approval. Neither police force sought independent advice about the performance and effects of LRADs prior to their acquisition; both forces relied on the manufacturer's representations.

IX. How the respondents plan to use LRADs

A. The objectives of using LRADs

[48] Staff Superintendent Jeff McGuire, of the TPS Operational Services division, deposed that the TPS will use the LRAD as a communications tool to help ensure public safety and health:

> The LRAD allows the TPS to broadcast critical information, with great voice clarity, to large noisy outdoor gatherings or to distant marine craft. It can do this even if there is significant ambient crowd noise to be heard over. As well, it has numerous other policing applications.
>
> The TPS' Public Safety Unit will primarily use the LRAD to convey information and instructions. Such communications and instructions may be essential to maintain public safety, especially in a chaotic, noisy crowd situation. For example, if within a large crowd there are a small number of demonstrators acting violently, the LRAD will allow the TPS to ask the crowd to disperse, and provide the crowd with information on where to do so safely. As well, it will allow the TPS to warn a crowd in which violent events are occurring, that police officers will be entering and action taken and may, for example, by using horse mounted officers to control crowds. This provides people with an opportunity to leave peacefully, before any police action occurs.
>
> Failure to communicate, particularly in an emergency situation can lead to dire results.
>
> The issues one faces in law enforcement are not the same as those in the work place. Critical information needs to be conveyed for public safety purposes, and heard over whatever other urban sounds may be present. Accordingly, police, fire and ambulance sounds need to be loud enough to be heard. Announcements cannot be made over a large

> and noisy crowd, and have any hope of being heard, unless they are delivered at significant volume.[6]

[49] The TPS Emergency Task Force already has used its LRAD during the execution of a search warrant, and the Marine Unit plans to use its boat-mounted LRAD 300X for search and rescue, maintaining perimeter control on Lake Ontario, and interdiction of lake traffic. The TPS does not anticipate using the 300X model for crowd control. As S/Superintendent McGuire acknowledged, however, "I can't rule it out completely." If there was a large disorderly crowd, especially around the docks or Toronto Island, it might be used, but he thought it unlikely it would be transported to the downtown core for land use "because we have three on the ground here, so I don't see that happening."[7]

[50] S/Superintendent McGuire described, from the perspective of the TPS, the advantages of using LRADs for crowd control during the G20 Summit:

> Security for the G20 conference in which the TPS is providing police services is unprecedented. Very large crowds may be present. Without the LRAD, the TPS would use loud hailers, and perhaps banners, to try to convey information to such crowds; these are not an effective means of attracting a crowd's attention. Loud hailers may not be heard over the noise of the crowd; banners may not be noticed.
>
> The ability of LRAD to help resolve difficult situations peacefully without resorting to the use of force, makes it an important and useful tool.[8]

[51] The TPS believes that based on the past experience of international summits, "there is a real risk that a small minority of protestors may act violently." The TPS thinks that LRADs can assist in defusing such situations by communicating with the crowd, providing them with directions and an opportunity to extricate themselves from the situation.[9] S/Superintendent McGuire deposed:

> Communication is important to deescalate situations and avoid violence.
>
> No one can predict whether at the upcoming G20 Conference the extent to which the LRAD will be necessary. It is however a valuable communication tool which can be useful in deescalating potentially violent situations. The TPS wishes to have that tool as part of its mandate to ensure public safety and keep the peace, at the G20 and elsewhere.[10]

[52] S/Superintendent McGuire deposed that LRADs would not be used by the TPS to prevent anyone from exercising their lawful rights to freedom of expression, peaceful assembly and

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[6] Affidavit of Jeff McGuire, paras. 4 to 7.
[7] McGuire cross-examination, QQ. 17-19.
[8] McGuire Affidavit, paras. 12 and 13.
[9] McGuire Affidavit, para. 17.
[10] McGuire Affidavit, paras. 41 and 42.

association, nor would the TPS use them to induce compliance through discomfort or pain. In support of this position he referred to statements made by TPS Chief Blair at a June 12, 2010 public meeting of the Police Services Board:

> It is not our intent and we will not be using this device as a force option. It is for us a communication device…
>
> Quite often, we find, that people have gathered with the full intent of demonstrating peacefully. And the Toronto Police Service intends to do everything possible to facilitate such demonstrations to allow people and to help them rally at safe locations, to march if that's what they choose to do, but to do so in a way which is safe.[11]

[53] According to Superintendent Charlebois, the OPP intends to use LRADs in two ways – to broadcast information to crowds and to get the attention of a crowd. He deposed:

> One of the fundamental duties of a police officer as established by the common law and by section 42 of the *Police Services Act* is to keep the peace and ensure public safety. As described above, I have been involved in policing many large incidents. Events involving large numbers of protesters can be very loud. Crowd control is extremely difficult when police officers cannot communicate effectively with demonstrators or protesters. It is difficult to keep the peace and protect the public in those circumstances. Officers have always had to rely on megaphones to be heard. Unfortunately, the sound quality and volume of megaphones are often too poor for appropriate communication. The police need to be able to communicate at a higher decibel level than protesters, otherwise instructions and warnings will be drowned out. This can lead to serious consequences in an emergency situation.[12]

B. The need for communications with crowds

[54] Both the TPS and OPP filed evidence about the importance of communications in preserving the peace and defusing potentially violent situations. On behalf of the TPS, S/Superintendent McGuire deposed:

> Communication with the public is key to de-escalating situations and avoiding violence. It is important to be able to communicate with a crowd to give them an opportunity to disperse peacefully before any police action occurs, and to convey information as to how they can do so. In crowd situations, protesters and the public should always be made aware of likely police action, in order to make informed choices, particularly where a use of force may be a possibility.
>
> In fact, the need for police forces to communicate effectively with crowds has been stressed by the applicant Canadian Civil Liberties Association (CCLA). In a May 21,

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[11] McGuire Affidavit, para. 40; Ex. A to the Affidavit of Meaghan Gray.
[12] Charlebois First Affidavit, para. 16.

2010 communication to the TPS, the CCLA stated, the "Protesters should be given clear orders and explicit warnings, and time to voluntarily respond, before force used." The full text of that communication is being attached to the Affidavit of Meaghan Gray.

The public inquiries that arose out of the APEC Conference in Vancouver and Ipperwash both stressed the importance of police forces effectively communicating with crowds during demonstrations. The LRAD facilitates such communication. I understand that the OPP will be filing excerpts of those reports in their materials. By way of summary however, I note the following recommendation of the APEC inquiry:

> "31.1.10 Warning to Protestors
>
> Before taking action that could result in physical confrontation, police should make all reasonable efforts to warn protesters of the duty then resting with the police (such as, to clear a roadway); the steps they intend to take to fulfil that duty; and what actions the protesters should take to allow the police to fulfil that duty and to allow the protesters to avoid arrest. Once the warning has been given, the protesters should be given a reasonable opportunity to comply before the police take further steps."[13]

[55] In his affidavit Superintendent Charlebois recounted the experience of the OPP during some past demonstrations and protests where the police were not able to communicate effectively with protestors using megaphones. He stated that in the past difficulties in so communicating had led police to use crowd control devices, such as tear gas, whereas more effective communication tools could have avoided such tactics. Superintendent Charlebois also commented on the recommendations made by Commissioner Sidney Linden in his *Report of the Ipperwash Inquiry and Recommendations*:

> As an organization, the OPP is familiar with the events that led to the shooting death of Dudley George in Ipperwash Provincial Park on September 7, 1995. The death of Mr. George led to a lengthy public inquiry and a comprehensive Report, including recommendations, from Commissioner Sidney Linden. In numerous parts of his Report, Commissioner Linden discussed the failure of the OPP to communicate effectively with the Aboriginal protesters. The protesters misunderstood the intentions of the OPP, with tragic consequences. At page 693 of the Report, Commissioner Linden made the following recommendation:
>
> > Police planning for responding to an Aboriginal occupation or protest should include:
> >
> > > a/ a communication strategy for important messages that ought to be conveyed to the occupiers;

[13] McGuire Affidavit, paras. 16 to 19.

> b/ the technical aspects of how the police would communicate with the occupiers; and
>
> c/ specified people outside the police service who would effectively communicate with the occupiers.
>
> While this recommendation was made in the context of an Aboriginal land dispute, I believe that it is equally applicable and important to policing large gatherings of protesters and demonstrations, such as the OPP expect at the G8 and G20 Summits. [14]

C. The operating procedures for LRADs adopted by the respondents

[56] Both the TPS and the OPP have developed standard operating procedures for the use of their LRADs. As the preparation for the hearing of this motion unfolded and cross-examinations were conducted, both forces made some changes to their operating procedures - the TPS once and the OPP twice.

[57] S/Superintendent McGuire deposed that when the TPS uses LRADs in accordance with those policies, "it is highly unlikely that any citizen will face any sound in excess of 96 decibels sound pressure ("SPL") from the 100X" or "any volume in excess of 106.8 decibels/SPL" from the 300X unit. He stated that the 300X unit is mounted on a boat and it would only be used if all the 100X units were in operation and a further LRAD was needed on land.[15]

[58] The Public Safety Unit, Marine Unit and Emergency Task Force Unit of the TPS each have issued guidelines for the deployment and operation of LRADs. S/Superintendent McGuire summarized the key points of the guidelines:

(i) When using a 100X model, the operators must ensure that the area in front of the device is clear for 10 meters before activating; it cannot be used unless the area in front is clear at least 10 metres. When separated from a person between 10 to 75 meters, the 100X may only be used at a volume up to the line between the yellow and red volume zones. There is an exception, however:

> "In circumstances where it is necessary in order to properly communicate when there is an imminent threat to public safety, the volume on the LRAD 100X may increase beyond that level, but will not exceed full volume within 75 meters."

(ii) The 300X model cannot be activated unless the area in front of the device is clear for 22 meters. Full volume can only be used if the area in front of the device is clear for 75 metres. Accordingly, the 300X can be used at volumes up to the yellow/red line if the separation between the device and a person is between 22 to 75 metres. However,

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[14] Charlebois First Affidavit, para. 18.
[15] McGuire Affidavit, paras. 20 to 22.

a higher volume can be used "in an emergency situation, in which case the operator may increase the volume but not to full volume within those parameters."[16]

(iii) Officers in the Public Safety Unit, which deals with crowds, must ensure these distance separations by using a laser range finder to mark the distance between the crowd and the LRAD. A note of the date, time, distance and operator of the Laser Range Finder must be made;

(iv) Operators can only use the Alert function for a 2-5 second burst. The alert is not intended to be used more than once during an incident. It is to be used only to get the crowd's attention for an upcoming voice message. From S/Supt. McGuire's cross-examination it emerged that the concept of "incident" is a fluid one, depending on the circumstances on the ground. As little as 20 minutes might elapse between incidents.[17]

(v) TPS operators of LRADs do not have the authority to decide to deploy them, but require high level approval through the chain of command. During the G20 summit, operators within the Public Safety Unit can only deploy the LRAD if their Section Site Commander (i.e. the individual in charge of a section of 30 officers in which the LRAD is located) has obtained approval from the Incident Commander at the Major Incident Command Centre. This latter individual is a Superintendent;

(vi) Other than at the G20, approval of Public Safety Section Site Commander must be obtained (an Inspector). Exactly where an LRAD is to be deployed, and the message to be conveyed, is decided by the Public Safety Section Site Commander in all cases;

(vii) Concerning the Marine Unit, for crowd control purposes, the approval of a Public Safety Section Site Commander is required before an LRAD is deployed (i.e. an Inspector);

(viii) Voice messages on the LRAD will typically be short, clear directives to crowds. The directive for the Public Safety Unit contains suggested message language. These messages take approximately 25 seconds to read in English. They must be read in both official languages during the G20. Therefore the total length of such messages would be approximately one minute. The directive calls for three warnings (total of three minutes);

(ix) All TPS LRAD operators have received training in its safe use and operation. The machines may only be operated by trained staff. The ETF Unit does not get involved in crowd control. S/Superintendent McGuire noted that the failure of an operator to

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[16] McGuire cross-examination, Statement of Counsel, p. 3.
[17] McGuire cross-examination, Q. 56.

adhere to the guidelines would constitute neglect of duty and insubordination and would expose the officer to *Police Act* charges.

[59] The OPP has established Standard Operating Procedures ("SOPs") for the use of LRADs by its members. The key features of the OPP SOPs are as follows:

(i) The Voice function will be used to communicate with protesters;

(ii) The OPP will not use the Alert function unless the Incident Commander on the scene considers it necessary to get the attention of protesters. The Incident Commander may consider such a course of action necessary where he or she is concerned about a potential breach of the peace, where an emergency vehicle or personnel need to be able to move to an area, or to provide an important direction to the crowd where it is obvious that the crowd has not heard the direction or is not paying attention to it.;

(iii) The SOP requires that the Alert function should be used for no longer than 2-5 seconds and only for the purpose of gaining the attention of the public or police. It will not be used for any other purpose. The Alert function is not intended to be used consecutively. The SOP requires a minimum interval of 30 seconds between uses of the Alert function;

(iv) For the 100X model, operators must ensure that the device is not used at any volume setting if it is within 10 metres of any person. At distances between 10 and 75 metres, the 100X may only be used in the green and yellow volume settings for either the Voice or Alert functions. If the crowd is at a distance of 75 metres of greater, the 100X may be sued at the maximum volume for either the Voice or Alert functions;

(v) The 300X model cannot be used at any volume setting for either the Voice or Alert function when it is within 75 metres of a crowd. At longer distances it may be used at maximum volume on either function;

(vi) The LRAD operator shall record the length of time the Alert tone is utilized and the volume level at which it is utilized. The SOP requires that only qualified persons should operate an LRAD. All operators shall be supervisors in rank and will be under the command of a Public Order Commander, Critical Incident Commander or Incident Commander. LRADs will only be deployed with two qualified operators.

D. The training conducted of TPS and OPP LRAD operators

[60] Nine TPS officers, and four or five OPP officers, attended a six-hour training session last month put on by the Canadian distributor of LRADs. The training consisted of classroom and outdoor sessions. Constable Paul Breeze of the TPS has trained 22 Public Safety Unit officers in the use of LRADs. The two-hour training session included classroom and practical components. Although each trainee wrote a short test at the end of the session, the test focused on basic mechanical aspects of the LRAD; no questions were asked about the standard operating procedures for using LRADs. According to Superintendent Charlebois, about eleven OPP officers will have received training on LRADs by the time the G8 Summit starts, with many trained by members of the TPS.

X. Comparison of OPP and Hatch test results in light of proposed operating procedures

[61] In the tables below I have attempted to depict the maximum sound levels which possibly could result from the operation of the 100X and 300X LRADs owned by the TPS and OPP if used in accordance with those forces' guidelines. The tables display the measurements (dB or dBA) resulting from both the OPP and Hatch field tests. Both sets of tests were conducted in an open, rural environment. Based on the expert evidence adduced on the motion, one should add 3 to 6 dB to the results shown on the tables to approximate the sound levels caused by use of LRADs in a downtown urban environment:

100X Model	**Max. at 1 metre: 136 dB**	**< 10 metres**	**10-75 metres**	**75 metres**	**100 metres**
TPS	Use not permitted	Use not permitted	Yellow/Red line, but up to max. if required	Maximum volume permitted	Max. volume permitted
Max. measured sound levels		Not measured	**Voice:** 82 (OPP @ 50m); 94 (Hatch @ 10 m) **Alert:** 112 (OPP @10m); 111 (Hatch @ 10 m).	**Voice:** 77 (OPP); 81 (Hatch) **Alert:** 96 (OPP and Hatch)	**Voice:** 76 (OPP); 80 (Hatch) **Alert:** 94 (OPP and Hatch)
OPP	Use not permitted	Use not permitted	Green + Yellow	Maximum volume permitted	Maximum volume permitted
Max. measured sound levels			**Voice:** 82 (OPP @ 50m); 86 (Hatch @ 10m) **Alert:** 100 (OPP @10m); 105 (Hatch @ 10m)	Same as TPS	Same as TPS

[62] Assuming the TPS operates its 100X models in accordance with its standard operating procedures, the measurements taken from the OPP and Hatch field tests show that members of the public could be exposed to a maximum sound level of 94 dBA from the operation of the Voice function 10 metres from a person and 112 dBA from the operation of the Alert function 10 metres from a person. Under the Ontario *Occupational Health and Safety Act* workplace regulations, a worker should not be exposed each day to more than approximately 1 hour of sound at 94 dBA or one minute of sound at 112 dB.

[63] If one adds 3 to 6 dB to the measured results to take into account the operation of LRADs in an urban, built-up environment, then members of the public could be exposed to a maximum sound level of 100 dBA from the TPS' operation of the Voice function 10 metres from a person and 118 dB from the operation of the Alert function 10 metres from a person. Under the Ontario *Occupational Health and Safety Act* workplace regulations, a worker should not be exposed each day to more than approximately 15 minutes of sound at 100 dBA or 12 seconds of sound at 118 dB.

300X Model	**Max. at 1 metre: 142 dB**	**< 22 metres**	**22-75 metres**	**75 metres**	**100 metres**
TPS	Use not permitted	Use not permitted	Yellow/Red line, but up close to max. in emergency	Maximum volume permitted	Max. volume permitted
Max. measured sound levels		Not measured	**Voice:** 98 (OPP @ 22m); 104 (Hatch @ 22m) **Alert:** 112 (OPP @22m); 118 (Hatch @ 22 m).	**Voice:** 95 (OPP and Hatch) **Alert:** 99 (OPP); 106 (Hatch)	**Voice:** 97 (OPP); 92 (Hatch) **Alert:** 102 (OPP); 106 (Hatch)
OPP	Use not permitted	Use not permitted	Use not permitted	Maximum volume permitted	Maximum volume permitted
Max. measured sound levels				Same as TPS	Same as TPS

[64] Assuming the TPS operates its 300X model in accordance with its standard operating procedures, the measurements taken from the OPP and Hatch field tests show that members of the public could be exposed to a maximum sound level of 104 dBA from the operation of the Voice function 22 metres from a person and 118 dBA from the operation of the Alert function 22 metres from a person. Under the Ontario *Occupational Health and Safety Act* workplace regulations, a worker should not be exposed each day to more than approximately 6 minutes of sound at 104 dBA or 12 seconds of sound at 118 dB.

[65] If one adds 3 to 6 dB to the measured results to take into account the operation of LRADs in an urban, built-up environment, then members of the public could be exposed to a maximum sound level of 110 dBA from the TPS' operation of the LRAD 300X Voice function 22 metres from a person and 124 dBA from the operation of the Alert function 22 metres from a person. Under the Ontario *Occupational Health and Safety Act* workplace regulations, a worker should not be exposed each day to more than approximately 1.5 minutes of sound at 110 dBA. On the evidence before me the *OHSA* regulation only permits 6 seconds of exposure to sound at a 121 dBA level, so I infer that the permissible duration for sound at 124 dB would be less than that, if any is permitted at all.

XI. Experiences elsewhere in the use of LRADs during public demonstrations or protests

[66] According to the affidavits filed by the TPS, LRADs are used by the Peel Region Police Force, Vancouver Police Force and numerous police forces in the United States.

[67] The Vancouver Police operates a 500X LRAD. It is not in dispute that the Vancouver Police disabled the Alert function on their LRAD during the Olympics.

[68] Marc Lefebvre is an officer with the RCMP who heads up the Public Order Unit of that force's Critical Incident Program. Much attention was paid to an email he wrote which was produced during the course of cross-examinations. Mr. Lefebvre wrote that his unit was abstaining from endorsing the use of acoustical devices as a crowd management option. He queried the accuracy of representations made by LRAD's manufacturer, commented that when using LRADs on land operators invariably would increase the LRAD's volume to achieve their objectives, and noted that the directionality of the LRAD sound beam might be less accurate than stated by the manufacturer. He wrote:

> The PO-CIP has to date refused to endorse the use of Acoustical Devices as an approved Crowd Management option out of concern that doing so would place the RCMP at risk and render the organisation potentially liable should the devices be used inappropriately or by untrained personal. Either of these practices could result in causing undesired consequences, in the form of partial or permanent hearing damage to those exposed…
>
> Until further medical research has been completed/compiled and supporting data can provide practitioners assurances that these acoustical devices can be used safely and effectively, we have adopted the stance that the potential risks associated with their use

> currently outweigh the benefits that the RCMP can draw from utilizing this technology in a crowd control situation.

While Office Levebvre noted that when used effectively LRADs "can be very effective communication tools", he wrote that they should not be used for crowd deterrence purposes.

[69] On June 3, 2010 The Globe and Mail reported that a RCMP spokesperson had emailed the newspaper advising that the RCMP would use LRADs only in marine operations and the RCMP would not use LRADs as a crowd-control tool.

[70] Materials published by the manufacturer, the LRAD Corporation, give examples of the prior use of the Alert function by other police forces. One example cited the use of the LRAD 1000 to serve arrest warrants at a known methamphetamine lab. The police team expected to encounter three persons in the lab. They set up the LRAD about 50 metres from the front of the building, played the LRAD aversion tone at maximum volume, read the arrest warrant through the LRAD, with the result that "ten individuals came stumbling out of the building." No shots were fired and no forcible entry was required.

[71] Another example offered by the manufacturer was the use of LRAD by the Charlotte police department to break up a rowdy Fourth of July concert where radios were blasting: "Strategic placement and employment of the LRAD broadcast very quickly diffused the situation and cleared the property."

XII. The applicants' concerns about the use of LRADs during the G20 Summit

[72] The applicants expressed two concerns about the use of LRADs during the G20 Summit. First, they regard LRADs as "weapons" which have not received proper approval for use by police in Ontario under Regulation 926 (the "Regulation") made under the *Police Services Act*. The second concern is that the use, or the potential for the use, of LRADs against crowds demonstrating during the G20 Summit will have a chilling effect on expressive and associational freedoms and will infringe those freedoms in a manner that is not justified. As to the first concern, Ms. Des Rosiers deposed:

> To my knowledge, no Canadian independent scientific research has been conducted into the short-term and long-term effects of sonic cannons, particularly for their use in a city like Toronto. In my view, the introduction of any new weapon into police arsenals requires a process of objective scientific research into the short-term and long-term effects of the weapon's use, consultation with the public, and broader opportunities for input and debate. In my view, the requirement of approval under Regulation 926 is aimed at ensuring accountability and a measure of public oversight in the weapons used by police in Ontario. It is also aimed at ensuring that new weapons technologies conform to established technical standards, and may be safely deployed. It is essential that the Ministry establish standards for the use, maintenance and deployment of new technologies.
>
> …

> I am very concerned about the health effects of the sonic cannons on CCLA volunteers who will be monitoring police conduct at the event and persons who are taking part in protests, marches and rallies since the sonic cannons may be used as a mass crowd control and indiscriminately affect tourists, volunteer monitors, protesters and trouble makers.[18]

[73] Mr. Kenneth Georgetti, the President of the applicant, the Canadian Labour Congress, deposed:

> [9] …I am gravely concerned that, if used, these sonic cannons could have a detrimental impact on the health and well-being of participants at the public rally and march, including myself and other members of he CLC. I am alarmed about the potential of being exposed to the high decibel noise beam of the sonic cannon and the potential for permanent hearing damage to our ears as a result.

[74] As to the second concern, Mr. Georgetti deposed:

> [10] I am also deeply troubled that the sonic cannons will have a chilling effect on attendance at the public rally and march. If the sonic cannons are used to disperse crowds during the event, the CLC and its members, as well as the general public, will likely be forced to leave the area and will have to abandon a key opportunity to assemble, associate and organize around, and speak freely on, issues that matter most to us.

[75] Ms. Des Rosiers summarized the applicants' concerns and their reasons for seeking an interlocutory injunction in the following way:

> 29. I am deeply concerned about the harmful, lasting and irreparable effects of the Respondents planned deployment of sonic cannons during the G-8 and G-20 Summits. In my view, the use of the "alert" function on the sonic cannons and the "communications" function at a sound level above that prescribed by Ontario occupational health and safety legislation in policing and/or providing security before and during the Summits will seriously endanger the health and wellbeing of CCLA human rights monitors and others attending marches and rallies planned to coincide with the Summits.
>
> 30. I am deeply concerned about the failure on the part of the TPS and OPP to use the prescribed regulatory approval processes for the sonic cannons in a context of intended indiscriminate deployment in an urban setting.
>
> 31. In my view, any use by the Respondents of the "alert" function on sonic cannons and of the "communications" function at a sonic level above that prescribed by Ontario occupational health and safety legislation would drive individuals away from the public spaces where the sonic cannons are deployed. The use of the sonic cannons in this manner would thereby restrict or completely deprive affected individuals of their

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[18] Des Rosiers Affidavit, paras. 22 and 25.

> freedoms of expression, peaceful assembly and association while the sonic cannons are being deployed.
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> 32. I am also very concerned about the chilling effect that the sonic cannons have had on the desire of individuals to attend marches and rallies during the Summit. In my view, the Respondents' lack of clarity as to their planned use of the sonic cannons will have a chilling effect on expressive activity, peaceful assembly and association during the Summits as individuals fear the serious health repercussions that may be caused if sonic cannons are deployed on them or in their vicinity.
>
> 33. These harmful effects are irreparable for at least two reasons. No amount of damages ordered by the Court if the Application is successful would compensate the Applicants and other members of the public for the possible permanent loss of hearing due to the use of the sonic cannons.
>
> 34. In addition, damages could not compensate the Applicants and other members of the public for the lost opportunity to effectively express their views to G-8 and G-20 leaders during the Summits.
>
> 35. It is due to these irreparable harms resulting from the Respondents' conduct, and potential future conduct, that the Applicants are seeking an interlocutory injunction in this proceeding. In my view, these irreparable harms outweigh any potential harm that could be caused to the Respondents if the Court grants an interlocutory injunction in this case. The Respondents would be permitted to use the "communications" function on the sonic cannons at a level up to that prescribed by Ontario occupational health and safety legislation. They also would retain all the traditional means used to disperse crowds without having to resort to a new, untested, highly questionable, and unapproved weapon with such dangerous potential effects.

[76] Danielle McLaughlin is the Director of Education and Administration at the CCLA. She intends to serve as a Human Rights Monitor during the G20 Summit. Ms. McLaughlin has suffered from hearing loss. She deposed:

> I am gravely concerned that if the sonic cannons are used by the police I will not be able to attend the marches and rallies as a Human Rights Monitor, because I cannot risk further hearing damage. If this turns out to be the case, I feel that my inability to participate in the marches and rallies will be a loss to the community of participants in terms of my contribution as a Monitor. I also feel that it would be a significant personal loss in terms of my own opportunity to express, associate, and assemble freely and peacefully during the Summit. These losses would not be compensable by an award of damages at the hearing of the application that the CCLA and others have brought against the Toronto Police Service and the Ontario Provincial Police.[19]

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[19] McLaughlin Affidavit, para. 6.

[77] Mr. Mark Calzavara, who plans to attend the Public Rally and March, also expressed concern about the use of LRADs:

> It is both the intensity of the sound tunnel and its indiscriminate nature that concern me most about the sonic cannon. I am very concerned that I and others attending public rallies and demonstrations will find ourselves in a situation where we cannot escape the sound tunnel of a deployed sonic cannon…If I cannot move to safety quickly enough because of the crowds, or for some reason I am incapacitated, I may be at risk of permanent ear damage if I happen to be near the part of the crowd which the police are targeting with their sonic cannon. I believe that I may have to leave a public demonstration early out of fear of coming within the 'cross-fire' of this indiscriminate sonic weapon.
>
> I am also deeply concerned about the chilling effect of the sonic cannons on the attendance of members of the Council of Canadian and the general public at the planned events around the Summit. The Council of Canadian is purchasing 7,000 earplugs, at a cost of approximately $800, to hand out to participants at public rallies and marches. Even so, I believe the sonic cannons have created an atmosphere of intimidation and fear and that organizers such as myself are reconsidering how we participate in public rallies and marches, in order to minimize the risk to our health and safety.[20]

XIII. Response of the police forces to the applicants' concerns

[78] On May 21, 2010, the CCLA met with members of the Integrated Security Unit to discuss security arrangements during the summits, including whether the ISU intended to deploy LRADs. According to Ms. Des Rosiers, at the meeting members of the ISU confirmed that the TPS intended to use LRADs as part of their policing efforts and did not plan to disable the Alert function. The CCLA informed the ISU that they would be organizing teams of human rights monitors to watch police interactions with protestors during the Summit.

[79] On June 1, 2010, Ms. Des Rosiers and Ms. Deshman wrote to TPS Chief William Blair outlining their concerns about the use of LRADs and sought assurances that the TPS would not deploy LRADs during the summit. On June 11 Mr. Jerome Wiley, counsel in the Office of the Chief of Police, responded advising that LRADs are not designed as weapons, would not be used as such by the TPS, and their use was subject to strict guidelines.

[80] Ms. Meaghan Gray, a member of the TPS Public Information Section, deposed that on June 2 she received an email from Ms. Des Rosiers of the CCLA requesting assurances from the TPS that CCLA monitors be allowed to cross police lines for safety reasons to leave a demonstration area. Ms. Gray took from that request that the CCLA anticipated that some of the

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[20] Calzavara Affidavit, paras. 8 and 9.

demonstrations might turn violent. Ms. Gray responded that "no member of the public including members of the media or CCLA monitors will be permitted to cross police lines."

XIV. Legal tests governing the applicants' motion for an interlocutory injunction

A. Test applicable to interlocutory injunctions involving *Charter* claims

[81] The test articulated by the Supreme Court of Canada in *RJR-MacDonald Inc. v. Canada (Attorney General)*[21] remains the one to be applied on motions for interlocutory injunctions containing claims under the *Charter*:

> 77 As indicated in *Metropolitan Stores*, the three-part *American Cyanamid* test should be applied to applications for interlocutory injunctions and as well for stays in both private law and Charter cases.
>
> 78 At the first stage, an applicant for interlocutory relief in a Charter case must demonstrate a serious question to be tried. Whether the test has been satisfied should be determined by a motions judge on the basis of common sense and an extremely limited review of the case on the merits. The fact that an appellate court has granted leave in the main action is, of course, a relevant and weighty consideration, as is any judgment on the merits which has been rendered, although neither is necessarily conclusive of the matter. A motions court should only go beyond a preliminary investigation of the merits when the result of the interlocutory motion will in effect amount to a final determination of the action, or when the constitutionality of a challenged statute can be determined as a pure question of law. Instances of this sort will be exceedingly rare. Unless the case on the merits is frivolous or vexatious, or the constitutionality of the statute is a pure question of law, a judge on a motion for relief must, as a general rule, consider the second and third stages of the Metropolitan Stores test.
>
> 79 At the second stage the applicant must convince the court that it will suffer irreparable harm if the relief is not granted. 'Irreparable' refers to the nature of the harm rather than its magnitude. In Charter cases, even quantifiable financial loss relied upon by an applicant may be considered irreparable harm so long as it is unclear that such loss could be recovered at the time of a decision on the merits.
>
> 80 The third branch of the test, requiring an assessment of the balance of inconvenience, will often determine the result in applications involving Charter rights. In addition to the damage each party alleges it will suffer, the interest of the public must be taken into account. The effect a decision on the application will have upon the public interest may be relied upon by either party. These public interest considerations will carry less weight in exemption cases than in suspension cases. When the nature and declared purpose of legislation is to promote the public interest, a motions court should not be concerned whether the legislation actually has such an effect. It must be assumed to do

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[21] [1994] 1 S.C.R. 311; *Harper v. Canada (Attorney General)*, [2000] 2 S.C.R. 764, at para. 4.

> so. In order to overcome the assumed benefit to the public interest arising from the continued application of the legislation, the applicant who relies on the public interest must demonstrate that the suspension of the legislation would itself provide a public benefit.

[82] It is worth repeating that in *RJR-MacDonald* the Supreme Court of Canada acknowledged that "the complex nature of most constitutional rights means that a motions court will rarely have the time to engage in the requisite extensive analysis of the merits of the applicant's claim."[22] Consequently:

> Once satisfied that the application is neither vexatious nor frivolous, the motions judge should proceed to consider the second and third tests, even if of the opinion that the plaintiff is unlikely to succeed at trial. A prolonged examination of the merits is generally neither necessary nor desirable.[23]

[83] In light of the "relatively low threshold of the first test and the difficulties in applying the test of irreparable harm in Charter cases", the Supreme Court of Canada has recognized that many interlocutory proceedings fall to be decided on the third branch of the test – the balance of convenience, or balance of inconvenience.[24]

[84] Justice Sharpe, in his leading text on injunctions, offers the following summary of the jurisprudence involving requests for injunctions in *Charter* cases:

> The net effect of *Metropolitan Stores* and *RJR-Macdonald* is that interlocutory injunctions will be difficult to obtain in constitutional litigation. There appear to be three situations where interlocutory relief may receive favourable consideration. First are those cases where a pure question of law is presented and the court can as readily decide that issue on an interlocutory application as at trial although the court has said that these cases will be rare. The second is where circumstances giving rise to the litigation are so urgent and transient that the constitutional claim will never be adjudicated upon the merits unless the matter is resolved at the interlocutory stage. Third are the exemption cases where the law or regulation at issue applies to a limited number of individuals and no significant public harm would be suffered…[25]

[85] The TPS submitted that since part of the relief sought by the applicants in this proceeding relates to the use of LRADs at the G20 Summit, the granting of an injunction effectively would provide the applicants with the final relief they seek in the proceeding and therefore they should meet a higher threshold standard on the merits.[26] I do not accept that submission. A review of the Notice of Application discloses that the applicants seek relief regarding the use of LRADs

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[22] *RJR-MacDonald, supra*., at para. 48.
[23] *RJR-MacDonald, supra*., at para. 50.
[24] *RJR-MacDonald, supra*., at para. 62.
[25] Mr. Justice R. J. Sharpe, *Injunctions and Specific Performance* (Aurora: Canada Law Book, 2009), at §3.1330.
[26] TPS Factum, para. 83.

both at the G20 Summit and otherwise. While the disposition of this motion will determine the use of LRADs at tomorrow's G20 Summit, it will not finally adjudicate all the issues raised in the application about more general use of the devices by the respondents.

B. *Quia timet* injunctions

[86] *Quia timet* injunction requests require the court to assess the propriety of injunctive relief without the advantage of actual evidence as to the nature of the harm inflicted on the plaintiff or applicant. Issues of prematurity may arise in such circumstances because of the difficulties involved in predicting future conduct in the absence of any evidence about the harm suffered due to past conduct.[27] Although courts certainly possess the jurisdiction to grant *quia timet* injunctions, as Justice Sharpe has observed in his text: "[T]he courts have adopted a cautious approach when asked to award an injunction prior to actual harm being suffered and have said that there must be a high degree of probability that the harm will in fact occur."[28] Language such as "proof of imminent danger" and "proof that the apprehended damage will, if it comes, be very substantial" has enjoyed frequent usage in the *quia timet* jurisprudence.[29]

[87] In cases of requests for the granting of relief for a prospective *Charter* violation, the Supreme Court of Canada jurisprudence has signaled that before a court acts to restrain government action, it must be satisfied that there is a very real likelihood that an individual's *Charter* rights will be prejudiced in the absence of the requested relief.[30]

[88] The approach described by Justice Sharpe in his text is one that I find practical and helpful:

> While the test has been posed in terms of the temporal imminence of harm, it is submitted that this is not the only, or necessarily best, way to describe the analysis which is suggested by the results reached. What the court does look for is the information necessary to predict with confidence not only that the harm will occur but also other relevant circumstances which will then exist. In other words, the court must be satisfied that the relevant factors which bear upon the granting of injunctive relief have crystallized. Cases in which *quia timet* injunctions have been granted may be taken to suggest that the notion of crystallization is an appropriate way to describe the state of affairs the courts require before granting injunctive relief.[31]

[89] The difficulties in predicting future conduct and future harm come to the fore most acutely during a court's consideration of the balance of convenience. As Justice Sharpe has written:

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[27] See Sharpe, *supra*., at §1.660.
[28] Sharpe, *supra*., at §1.690.
[29] Sharpe, *supra.*, at §1.710.
[30] See the discussion of the cases in the minority judgment in *Phillips v. Nova Scotia (Commission of Inquiry into the Westray Mine Tragedy)*, [1995] 2 S.C.R. 97, at paras. 108 to 110.
[31] Sharpe, *supra.*, at §1.750.

> A related matter is the weighing of the benefit the injunction confers on the plaintiff against the cost it imposes on the defendant. Again, this assessment can be made only where the court has a firm grasp on the actual effect the harm will have on the plaintiff at the time it occurs and the cost alleviating or avoiding that harm will impose upon the defendant. If the situation is still fluid or uncertain, an injunction granted prematurely may impose unjustified costs on the defendant and, of course, this is particularly the case where the plaintiff seeks a mandatory injunction.[32]

XIV. Serious questions to be tried

A. The applicants' Section 7 *Charter* claim

[90] Section 7 of the *Charter* provides that "everyone has the right to life, liberty and security of the person and the right not to be deprived thereof except in accordance with the principles of fundamental justice." The applicants submit that a serious issue exists as to whether the respondents would be breaching Regulation 926 under the *Police Services Act* by deploying LRADs, using their Alert function and their Voice function in excess of the *OHSA* prescribed workplace levels, without having obtained approval from the Solicitor General. As put by the applicants in their factum:

> The Moving Parties submit that sonic cannons – in particular, the "alert function" and the "communications" function when deployed at a sound level exceeding the maximum prescribed under occupational health and safety legislation - constitute "weapons" within the meaning of Regulation 926. Sonic cannons are commonly categorized by experts, and even in defense publications, as non-lethal, less than lethal or sub-lethal "weapons". Even the RCMP internal LRAD report, refers to one of the purposes of sound cannons as an "Area Denial instrument (weapon)".The level of sound produced by a sonic cannon can exceed the human threshold for pain. Sonic cannons are designed to induce individual compliance through human discomfort and pain, as evidenced by the widespread use in military contexts. Therefore, they constitute weapons since they are used and/or designed to be used in causing injury or for the purpose of threatening or intimidating persons against whom they are deployed.
>
> At a minimum, there exists a serious issue as to whether sonic cannons are "weapons". Therefore, there is a serious issue as to whether the Respondents have violated and/or would violate Regulation 926 by deploying them without obtaining the required approval.[33]

[91] The applicants continued by arguing that given the capability of LRADs to cause pain and permanent hearing loss and the lack of testing conducted on them to date, their use would violate the applicants' security of the person, and that deprivation would not be done in accordance with the principles of fundamental justice because the respondents have not obtained

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[32] *Sharpe, supra*., at §1.770.
[33] Applicants' Factum, paras. 64 and 65.

permission to use LRADs as weapons under Regulation 926 and their use could not be justified under the common law doctrine of ancillary police powers:

> As noted above, the sonic cannons are largely untested devices, developed for military use. The indiscriminate nature of these devices is only compounded in an urban setting since the sound beam reflects off of solid structures such as buildings, glass and cars. As noted by the Respondent OPP's own expert, Mr. Tim Kelsall, "In a city, measurements out to 100 m could in some cases be typically 3-6 dB higher due to building reflections". Moreover, as noted in the RCMP internal review, the directionality of the sound beam is not as narrow as the manufacturer claims and innocent individuals on the periphery of the sonic cannon's sound tunnel can unintentionally be exposed to high intensity sound. The use as a crowd control weapon in cities therefore runs a serious risk of not only permanently injuring protesters, but of endangering innocent bystanders and even police personnel as well. To use such a device in a dense and urban environment like Toronto without proper independent research and testing would amount to an unjustifiable use of common law police powers.[34]

[92] The respondents submitted that no serious question exists on this issue. Their position is a simple one: LRADs are not weapons and LRADs, when used in accordance with their standard operating procedures, will not cause harm.

A.1 Deprivation of the security of the person

[93] What is the state of the evidence before me on the question of whether LRADs would harm demonstrators and protestors? In Section X, above, I depicted in tables the maximum sound levels which possibly could result from the operation of the 100X and 300X models owned by the TPS and OPP if used in accordance with their standard operating procedures. I added 6 decibels to the measured results to take into account the use of LRADs in a built-up urban environment. The highest sound levels resulted from the TPS operational guidelines which permit the use of higher volumes over shorter crowd separation distances than do the OPP standard operating procedures. For ease of reference, I summarize in the table below the results of that analysis:

[34] Applicants' Factum, para. 86.

	Maximum 100X sound level	***OHSA* maximum exposure time per day (approx.)**	**Maximum 300X sound level**	***OHSA* maximum exposure time per day (approx.)**
TPS	Voice: 100 dBA @ 10 metres	15 minutes	Voice: 110 dBa @ 22 metres	1.5 minutes
	Alert: 118 dBA @ 10 metres	12 seconds	Alert: 124 dBA @ 22 metres	Somewhere under 6 seconds
OPP	Voice: 92 dB @ 10 metres	96 minutes	Voice: 101 @ 75 metres	12.1 minutes
	Alert:111 dB at 10 metres	1.2 minutes	Alert: 112 @ 75 metres	1 minute

[94] While the estimated sound levels for the use of the Voice functions of both models in accordance with the TPS and OPP operating procedures fall within the range of commonly used household tools such as drills, food processors, weed whackers and circular saws, the estimated levels likely to result from the use of the Alert function within the maximum volume levels under the forces' guidelines do not.

[95] Dr. Harrison's uncontroverted expert evidence was that exposure to 100 decibel sound level can cause hearing damage in about 15 minutes, and damage within seconds at the 120 decibel level. Painful sounds occur around 125 decibels, with pain indicating a damaging insult to the ear.

[96] Of course, I have no evidence before me of the likely noise levels of the lawful demonstrations which the applicants seek to protect, let alone the noise levels that might be associated with any unlawful demonstrations. One need not be a soccer World Cup devotee to know about the high decibel sounds produced by South African fans on their vuvuzelas. One no doubt can expect that some demonstrators at the G20 Summit will adopt the vuvu as their noisemaker of choice.

[97] That said, the issue before me is whether a serious question exists for trial that the use by the TPS or OPP of their LRADs will infringe the applicants' security of the person. From the evidence before me, I am satisfied that if the TPS operates the Alert function on their 100X and 300X models in accordance with their current operating procedures, there is a very real likelihood that demonstrators may suffer damage to their hearing. The OPP has adopted more conservative distance separation and maximum volume limits at shorter distances than the TPS. I think a much weaker case has been advanced by the applicants that the OPP's use of their

LRADs would pose a very real likelihood for damage to demonstrators' hearing. It would take about 12 activations of the Alert function under OPP guidelines to begin to approach the *OHSA* prescribed duration limits for industrial workplaces. Notwithstanding this conclusion, I view the jurisprudence as imposing a modest burden on the applicants at this stage of the analysis, so I find that the applicants have raised a serious question to be tried with respect to the effect on demonstrators' hearing of the use of the Alert function by both respondents.

[98] At the hearing the applicants submitted that the sound level measurements taken by the OPP and Hatch were flawed and unreliable because of the hurried manner of their preparation, their use of a rural, not urban, area for testing, and a general lack of public scientific information about the operation of sound emanating from LRADs. Whatever frailties exist about the OPP and Hatch tests, their results were the only evidence about sound levels before me. Although Mr. Kelsall conceded that he would like to have had more time to conduct his tests and prepare his report, those time constraints resulted from the timetable surrounding this litigation. Mr. Kelsall's report struck me as the best efforts product of a qualified, independent expert within the time available, so I am satisfied that I can rely on his results for the purposes of this motion.

A.2 Principles of fundamental justice: do LRADs require Ministerial approval as weapons?

The Regulatory framework

[99] Regulation 926[35] made under the *Police Services Act*[36] (the "Regulation") prescribes procedures and standards for equipment used by police forces established under the Act:

> 14. (1) A member of a police force shall not use a weapon other than a firearm on another person unless,
>
> (a) that type of weapon has been approved for use by the Solicitor General;
>
> (b) the weapon conforms to technical standards established by the Solicitor General; and
>
> (c) the weapon is used in accordance with standards established by the Solicitor General.
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> (2) Subsection (1) does not apply to the use of a weapon on another member of the police force in the course of a training exercise in accordance with the rules of the police force.

If a device is designated as a "weapon", the Regulation requires a member of a police force to submit a report to the chief of police or Commissioner whenever the member uses a weapon other than a firearm on another person: s. 14.5(1)(b).

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[35] R.R.O. 1990.
[36] R.S.O. 1990, c. P.15.

[100] The *Police Services Act* does not define the term "weapon". The *Criminal Code* contains two definitions of "weapon". Section 2 defines "weapon" as meaning "any thing used, designed to be used or intended for use (a) in causing death or injury to any person, or (b) for the purpose of threatening or intimidating any person and, without restricting the generality of the foregoing, includes a firearm. Section 270.1, which creates the offence of disarming a police officer, defines "weapon" for the purpose of that offence as "any thing that is designed to be used to cause injury or death to, or to temporarily incapacitate, a person." The *Concise Oxford English Dictionary, Eleventh Edition,* includes, as a meaning of "incapacitate", to "prevent from functioning in a normal way".

A.2 Positions of the parties

[101] The applicants submitted that LRADs, particularly when used in their Alert function, operate as weapons and require approval under Regulation 926. In support of their submission that LRADs are weapons, the applicants pointed to defence publications, such as Defense Update, that have described LRADs as "directed acoustic weapons". Professor Wood contended that the LRAD belongs to the same class of weapons as Tasers.

[102] Neither the OPP nor TPS conceded that the Applicants had raised a serious issue to be tried with respect to the statutory interpretation of the word "weapons" in the Regulation. The OPP contended that none of the evidence proffered by the Applicants addressed the actual use to which the respondents intend to put LRADs – as communication devices. The OPP argued that the word "weapon" in Regulation 926 should be interpreted to mean an item that is designed to be, or intended for use as, a "weapon" within the meaning of the *Criminal Code*, but not to include items that are capable of being used as weapons if they are not designed to be used or intended for use as a weapon.

A.5 Analysis

[103] As can be seen, the parties disagree about two issues: (i) how to interpret the word "weapon" in section 14 of the Regulation, and (ii) whether LRADs fall within the definition of "weapon". The Regulation does not contain a definition of "weapon". Both sides have advanced arguments about how to interpret that word; each argument is worthy of consideration. A serious question to be tried exists regarding the meaning of the word "weapon" in the Regulation.

[104] In my view it necessarily follows that a serious question for trial also exists as to whether LRADs are "weapons" within the meaning of section 14(1) of the Regulation. If, after the hearing of the application on the merits, it is found that LRADs are weapons, then there is no dispute that the consent of the Solicitor General has not been secured and section 14(1) of the Regulation not followed. If the court finds that they are not weapons, then the consent of the Solicitor General was not required. On this motion I need not drill down into the merits of this issue. The arguments and evidence advanced by the parties satisfy me that a serious question for trial exists on whether LRADs fall within the category of "weapons" within the meaning of the Regulation.

B. Applicants' claims under sections 2(b), (c) and (d) of the *Charter*: infringements of freedom of expression, peaceful assembly and association

B.1 General Principles: sections 2(b), (c) and (d) of the *Charter*

[105] Canada enjoys an enviable reputation amongst the world's nations for its public culture of political expression. Although public speech still sometimes stumbles against pockets of process and content-based restrictions in public institutions, by and large Canadian public streets and places remain open and available for the expression of a wide variety of political and social messages. For example, last year judges of this court were front-row witnesses to the closure of University Avenue in front of the courthouse for an entire week as members of the Toronto Tamil community protested political events in Sri Lanka. That protest was permitted to continue even though it interfered with some operations of this court. Toronto now anticipates large public demonstrations and protests over the next few days as the G20 Summit unfolds.

[106] Section 2(b) of the *Canadian Charter of Rights and Freedoms* provides that everyone has the fundamental "freedom of thought, belief, opinion and expression, including freedom of the press and other media of communication." The analytic approach adopted by the Supreme Court of Canada to claims under section 2(b) requires a court to pose and answer three questions: (i) Does the applicant's conduct or statement have expressive content? (ii) If so, does the method or location of this expression remove that protection? (iii) If the expression is protected by s. 2(*b*), does the government action or legislation infringe that protection, either in purpose or effect?[37]

[107] Violent expression is not protected by the Charter, not due to any message it conveys, but "because the method by which the message is conveyed is not consonant with *Charter* protection"; "violence prevents dialogue rather than fostering it".[38]

[108] Not all public or government-owned property is available for *Charter*-protected expressive activity.[39] Public streets, however, "are clearly areas of public, as opposed to private, concourse, where expression of many varieties has long been accepted".[40] Expressive activities on public streets are *prima facie* protected by the *Charter*.[41]

[109] Sections 2(c) and (d) of the *Charter* are closely related to freedom of expression, protecting, as they do, the lawful means of expression – peaceful assembly and association.

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[37] See *Irwin Toy Ltd. v. Quebec (Attorney General)*, [1989] 1 S.C.R. 927; *Montreal (City) v. 2952-1366 Quebec Inc*., [2005] 3 S.C.R. 141, at para. 56.
[38] *Montreal (City), supra*., at paras. 60 and 72.
[39] *Montreal (City), supra*., at para. 74.
[40] *Montreal (City), supra*., at para. 18.
[41] *Greater Vancouver Transportation Authority v. Canadian Federation of Students – British Columbia Component*, [2009] 2 S.C.R. 295, at para. 27.

B.2 The claim of potential infringement

[110] The applicants submit that the activities in which they and their members wish to engage – public rallies, marches and observing the same – are forms of expression protected by section 2(b) of the *Charter*. No one disputes that submission. The applicants further contend that the potential for the deployment and use of LRADs infringes their protected section 2(b) rights. In their factum they put the argument as follows:

> The sonic cannons unquestionably have the effect of restricting the value-promoting expression of participants in the rallies and marches, including the Moving Parties and members of the general public. The sonic cannons produce a high-pitched, high decibel, ear-splitting sound beam that can cause extreme pain and permanent hearing damage and that is intended to disperse crowds. The sonic cannons are incapable of discerning between those individuals in the crowd whose expression is constitutionally protected and those whose expression is not. People young and old, families, visitors, groups and individuals gathered in public spaces for the purpose of exercising their constitutional right to free expression are at serious risk of becoming the casualty of an indiscriminate weapon.
>
> The very real threat and substantial likelihood of physical injury posed by the sonic cannons has a chilling effect on the thousands of Canadians, including the Moving Parties, and their families and children who were planning to march, protest and express core political beliefs during the G-8 and G-20 Summits. The sonic cannons suppress constitutionally protected activities in at least two ways: (1) by deterring individuals from attending public demonstrations, effectively silencing those who cannot or do not want to risk physical harm to themselves or their children; and (2) by limiting the manner in which individuals participate in public demonstrations, including by forcing them to remain on the periphery and even abandon key opportunities for political expression.[42]

Section 2(c) of the *Charter* protects the fundamental freedom of peaceful assembly, and section 2(d) that of association. The applicants contend that the fundamental freedoms of peaceful assembly and association are inextricably linked with their freedom of expression and equally susceptible of infringement "by the threat of physical harm by the sonic cannons."[43]

[111] The OPP submitted that the applicants had not raised a serious issue to be tried regarding violations of their section 2 *Charter* freedoms. Although the OPP accepted that the proposed peaceful protests fell within the protection of sections 2(b), (c) and (d) of the *Charter*, it argued that the Applicants' claim that the use of the LRADs would have a "chilling effect" is based on a speculative apprehension premised on sensationalized newspaper reports and an inaccurate understanding of the intended use of the LRADs. Further, the OPP contended that the applicants' *Charter* rights under ss. 2 and 7 would not be infringed by the intended use of the LRADs and, in

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[42] Applicants' Factum, paras. 73 and 74.
[43] Applicants' Factum, para. 77.

any event, the proposed use of the LRADs is a reasonable limit in all the circumstances and would be saved by s. 1.

[112] The TPS supported the position advanced by the OPP.

B.4 Analysis

[113] I conclude that the applicants have not demonstrated that a serious question exists for trial that the deployment of LRADs by the respondent police forces will work a "chilling effect" on the applicants' efforts to organize and hold lawful demonstrations or marches during the G20 Summit. The evidence filed by the applicants was highly speculative, anecdotal hearsay, and lacking in substance. Simply put, the evidence placed before me does not enable any reasonable prognostication about how many people may or may not attend the applicants' planned demonstration and march. Further, the cross-examinations of the applicants' affiants revealed that other causes might exist for any perceived difficulty in organizing the hoped-for turnout – e.g. the overall security measures taken for the G20 Summit, as well as the well-publicized risk of unlawful conduct by others. I see no evidentiary basis to support a causal link between the use of LRADs and any demonstrable "chilling effect" on the potential number of demonstrators at the applicants' activities this weekend.

XV. Irreparable harm

A. Positions of the parties

[114] The applicants identified three types of irreparable harm that they and the public would suffer should an injunction not issue: (i) the temporary or permanent loss of hearing that reasonably could be caused by the deployment of the LRADs; (ii) the lost opportunity to effectively assemble and express their views to G8 and G20 leaders during the Summits; and (iii) harm to the rule of law and the public interest caused by the respondents' breach of legislation in deploying LRADs as weapons without the required approval.

[115] In response the OPP submitted:

> The moving party has not established that failing to restrain the OPP's use of the LRADs on interlocutory basis would result in irreparable harm. The Applicants rely on speculative medical evidence that has not considered the actual uses to which the LRADs will be put. The expert evidence that does consider the actual uses to which the LRADs will be put indicates that the risk of harm is very small. Similarly, there is no evidence that the potential use of the LRADs will have any impact on the Applicants' ability to exercise their rights under s. 2 of the *Charter*.[44]

[44] OPP Factum, para. 48.

[116] The TPS noted that LRADs used in accordance with the force's operating guidelines will produce noise levels comparable to any number of common urban noises, such as leaf blowers and emergency sirens, and the duration of the sounds will be brief.

B. Analysis

[117] I accept that the probability of personal injury resulting from the conduct of agents of the government, such as police forces, could constitute harm which by its nature would be irreparable.[45] As stated earlier, I have concluded that a very real likelihood exists that demonstrators may suffer damage to their hearing from the proposed use of the Alert function at certain distances and volumes.

[118] I also accept the applicants' contention that deployment of the LRADs without proper statutory authorization, if such authorization is required, could constitute irreparable harm to the public interest in the sense of avoiding or undermining an established statutory regime. Regulation 926 under the *Police Services Act* reflects a legislative decision to place control over the selection and use of devices that could function as weapons in civilian, not police, hands. I accept the applicants' submission that:

> "the requirement of Ministry approval under Regulation 926 is aimed at ensuring accountability, consistency and a measure of public oversight in the police's deployment of weapons and use of force. It is also aimed at ensuring that new weapons technologies conform to established technical standards, and may be safely deployed."

Failure by a police force to secure approval from the Solicitor General for the use of a weapon constitutes a form of irreparable harm for purposes of injunction analysis.

[119] While the diminution of expressive rights could constitute irreparable harm, on the facts of this motion I conclude that the applicants have not demonstrated that the use of LRADs is likely to harm their expressive and associational rights. I have already commented on the thinness and speculative nature of the applicants' evidence on this issue.

XVI. Balance of convenience

A. Positions of the parties

[120] The applicants submitted that the balance of convenience favours granting the injunction requested because they seek a limited restraint on the respondent's "law enforcement arsenal in order to prevent the irreparable harms" they describe. The applicants argue that they do not seek to restrain the respondents from enforcing the law, controlling crowds, or communicating with protestors in a lawful manner, and the respondents would remain free to do so using all of the traditional means and tools. They would also remain free to use the "communications" function

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[45] *United Nurses of Alberta v. St. Micheal's Health Centre*, [2002] A.J. No. 1627, at paras. 11-13.

on the LRADs at a sound level equal to or below that prescribed under occupational health and safety legislation.

[121] In their factum the applicants described the consequences of refusing an injunction as follows:

> Refusing an injunction would enable the Respondents to use, without prohibition, the sonic cannons in an untested, unproven manner. Refusing the injunction would introduce a new weapon into the Canadian social fabric when such a "weapon" has not been tested, has never been used by the Respondents, and was expressly not used during the Vancouver Olympics. Refusing the injunction would also permit the Respondents to use a new weapon which Canada's leading law enforcement agency and the primary agency responsible for security at the Summit, the RCMP, does not approve for use for crowd control purposes. It is submitted that a prudent approach is required to restrain the deployment of sonic cannons in the manner sought to be enjoined pending disposition of the underlying Application.[46]

[122] In its argument the OPP stressed the magnitude of the security demands associated with the hosting of a summit of international government leaders and the threat posed by determined groups who may wish to target some or all of the Summit participants. Canada has invited international leaders to Toronto, and Canada bears the responsibility for ensuring their safety. The OPP submitted that public interest considerations weigh more heavily in cases like the present one where applicants seek to suspend the operation of the impugned legislation or government action entirely, rather than where an applicant seeks an exemption - the public interest is much less likely to be detrimentally affected when a discrete and limited number of applicants are exempted from the law in question.

B. Analysis

[123] In examining and balancing the public interest on this motion, I think a number of factors are at play, including the context presented by the G20 Summit for the applicants' exercise of their expressive freedoms, the need for police forces to be able to communicate clearly and in a timely fashion with demonstrators, the approach taken by other Canadian police forces to the use of LRADs, and the likelihood of harm posed by the use of the respondents' LRADs.

[124] The applicants are correct that the G20 Summit provides a unique opportunity for Canadian citizens and visitors to our country to express publically their views on a wide range of domestic and international issues. In the course of the past two days while writing these reasons I have been able to see out my window examples of expressive freedoms in action – two groups peacefully marched down University Avenue conveying, by numbers, voice and sign, the messages they wish others to consider.

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[46] Applicants' Factum, para. 120.

[125] Toronto's streets are no strangers to demonstrations. On the contrary. Anyone who attempts to drive around the more central areas of this city on any weekend from the spring until the fall will encounter road closures caused by street celebrations, charity runs and marches of all kinds.

[126] Not all public demonstrations are so peaceful. As the *Criminal Code of Canada* recognizes, public demonstrations and marches may start as lawful assemblies, but turn into unlawful assemblies and, perhaps, riots.[47] Membership in an unlawful assembly and participation in a riot are criminal offences. Common sense dictates that police forces have to be prepared to cope with the possibility of demonstrations turning unlawful. The police must attempt to protect those peaceful protestors who want no part of any unlawfulness, and they must be able to control any unlawful rump that remains. The statutory and common law duties of a police officer include preserving the peace, preventing crimes and the preservation of life and property.[48] The duties to preserve the peace and prevent crimes create an obligation on police to take proper and reasonable security measures with respect to visiting heads of state or high ranking dignitaries.[49]

[127] As well, the *Criminal Code* imposes positive duties on police officers to suppress any demonstrations that turn into riots. A peace officer who receives notice that there is a riot within his jurisdiction must take all reasonable steps to suppress the riot.[50] A mayor, or lawful deputy of a mayor,

> who receives notice that, at any place within the jurisdiction of the person, twelve or more persons are unlawfully and riotously assembled together shall go to that place and, after approaching as near as is safe, if the person is satisfied that a riot is in progress, shall command silence and thereupon make or cause to be made in a loud voice a proclamation in the following words or to the like effect:
>
> > Her Majesty the Queen charges and commands all persons being assembled immediately to disperse and peaceably to depart to their habitations or to their

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[47] Lawful assemblies may become unlawful if the persons assembled "conduct themselves with a common purpose in a manner that would have made the assembly unlawful if they had assembled in that manner for that purpose": *Criminal Code*, s. 63(2). An unlawful assembly is one "of three or more persons who, with intent to carry out any common purpose, assemble in such a manner or so conduct themselves when they are assembled as to cause persons in the neighbourhood of the assembly to fear, on reasonable grounds, that they (a) will disturb the peace tumultuously, or (b) will by that assembly needlessly and without reasonable cause provoke other persons to disturb the peace tumultuously": *Criminal Code*, s. 63(1). A riot is "an unlawful assembly that has begun to disturb the peace tumultuously": *Criminal Code*, s. 64. Membership in an unlawful assembly and participation in a riot are criminal offences: Criminal Code, ss. 65 and 66. The jurisprudence regards a tumult as an agitation of a multitude where there is disorder, confusion or an uproar, and to disturb the peace tumultuously requires an atmosphere of actual or constructive force or violence: See the cases summarized in Alan Gold, *The Practitioner's Criminal Code, 2010*, at pp. 94-95.

[48] *Police Services Act*, s. 42(1) and (3); *Dedman v. R*, [1985] 2 S.C.R. 2.
[49] *Knowlton v. R.*, [1974] S.C.R. 443, at 447.
[50] Criminal Code, s. 69.

> lawful business on the pain of being guilty of an offence for which, on conviction, they may be sentenced to imprisonment for life. GOD SAVE THE QUEEN.[51]

The respondents filed the texts of the escalating messages that they intend to broadcast to crowds in the event that lawful demonstrations turn sour.

[128] The *Criminal Code* goes on to provide that it is a criminal offence for a person to not peaceably disperse and depart from a place where the proclamation is made within thirty minutes after it is made.[52] The *Code* then states that every peace officer is justified in using, or in ordering the use of, as much force as the peace officer believes, in good faith and on reasonable grounds, is necessary to suppress a riot and is not excessive, having regard to the danger to be apprehended from the continuance of the riot.[53]

[129] The recommendations made by the APEC and Ipperwash inquiries, set out earlier in these reasons, emphasize in spades the need for clear, timely and effective police communication with demonstrators in order to avoid unnecessary conflict between the police and protestors and to preserve the peace. This point was made by the OPP in paragraph 20 of its Factum:

> In order to communicate with crowds of protesters, police need to make themselves heard. They need to be able to communicate at a higher decibel level than the protesters, otherwise instructions and warnings will be drowned out. In the past police have had to rely on megaphones to communicate with protesters. Unfortunately, the sound quality and volume of megaphones is often too poor for effective communication.

[130] The need for enhanced communications by the police with demonstrators in order to preserve the peace operates as a strong public interest factor supporting the use by the respondents of their LRADs as communication tools.

[131] On the other hand, the evidence before me raises several countervailing public interest concerns. First, it is noteworthy that the RCMP has decided, at least for the present, not to use LRADs for crowd control purposes, but to limit their use to marine operations. One of its concerns related to the potential for hearing damage resulting from improper use. At least some within that force have concluded that the potential risks associated with using LRADs currently outweigh the benefits of their deployment in a crowd control situation.

[132] Second, the Vancouver Police Department uses the Voice function of its LRAD, but it disabled the Alert function during the recent Olympics. The LRAD model used by that force is larger than those used by the TPS and OPP.

[133] Third, RCMP Officer Levebvre's email on the use of LRADs noted that the Boston police force ceased using their LRAD in crowd control situations out of a concern for public

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[51] Criminal Code, s. 67.
[52] Criminal Code, s. 68(b).
[53] Criminal Code, s. 32(1).

safety and fear of civil litigation issues. The size of the LRAD model used by the Boston force was not in evidence before me.

[134] Further, the LRADs are recent purchases made by both the TPS and OPP. The TPS has had one experience in using an LRAD, but it was not in a crowd control situation. It appears that the OPP has not yet used its LRADs. Training necessarily has been compressed. The applicants submitted that the hasty training and lack of experience with the units increase the risk of use inconsistent with the standard operating procedures. I have considered that submission very carefully, but I think two countervailing factors prevail – the LRAD units are not widely dispersed through either police force, and their use requires very senior command authorization.

[135] Weighing all these factors, I conclude that the balance of convenience favours rejecting any injunctive restraint on the use of the Voice functions for either the 100X and 300X models owned by the respondents. Affidavits from senior officers in the TPS and OPP commit to using the LRADs only for communication purposes. The need for clear and effective communications by the police to demonstrators is very important. That need is not outweighed by the evidence about the sound levels resulting from the use of the Voice function in accordance with the respondents' respective standard operating procedures. I therefore conclude that no injunction should issue restraining the TPS or OPP from operating their LRADs on the Voice function in accordance with their current standard operating procedures.

[136] The use of the Alert function raises different considerations because of the higher levels of sound generated and the single frequency of the emissions. In this regard, I cannot ignore the cautious approaches taken by the RCMP and the Vancouver Police to the use of LRADs. When I reviewed earlier in these reasons the results of the sound measurement tests conducted on the 100X and 300X models, I concluded that if the TPS were to operate the Alert function on their 100X and 300X models in accordance with their current operating procedures, a very real likelihood existed that demonstrators might suffer damage to their hearing. I thought a weaker case on the evidence existed in respect of the OPP's proposed use because that force adopted more conservative crowd separation distances, as well as lower maximum volume limits at shorter distances than did the TPS.

[137] On balance, I think the TPS standard operating procedures for the use of the Alert function on the 100X and 300X models permit the exposure of demonstrators to an undue risk of hearing damage. I understand that the TPS only plans to use the Alert function to gain a crowd's attention. I also understand that demonstrations can be loud and unruly and the police need to be heard over the crowd's noise level. Nevertheless, in light of the novelty of the devices in this jurisdiction, the lack of experience with them, the absence of independent scientific or medical articles on the effect of their use, I conclude that the balance of convenience favours enjoining the use of the Alert function on the TPS 100X and 300X models for Public Safety Unit purposes as currently stipulated in that force's standard operating procedures.

[138] I do not reach the same conclusion in respect of the OPP. Its more cautious crowd separation distances and lower maximum volume levels for the Alert function tip the balance of convenience against issuing an injunction.

XVII. Conclusion

[139] For the reasons given above, I dismiss the applicants' motion against the Ontario Provincial Police.

[140] I grant their motion against the Toronto Police Services in part. I order that the Toronto Police Services refrain from using the Alert function on their 100X and 300X units for any land-based Public Safety Unit application under the conditions prescribed in their current Public Safety Unit Specific Guidelines for the LRAD. I place no restraint on the use of the Alert function on the 100X or 300X model for marine or emergency task force applications; quite different considerations would apply to those types of applications.

[141] This injunction is subject to two conditions. First, the applicants must take this matter quickly to a final hearing. I am therefore granting the injunction only until October 30, 2010. I direct the parties to attend in Motions Scheduling Court no later than Friday, July 9, 2010, to seek approval for an expedited timetable that would see a final hearing of this application no later than October 30, 2010.

[142] Second, I have enjoined the use of the Alert function by the TPS for Public Safety Unit purposes, but not by the OPP. If counsel for the TPS notifies me by email, no later than 3 p.m. this afternoon, that the TPS has amended their standard operating procedures to adopt the distance and volume limitations contained in the existing OPP standard operating procedures for the Alert function on their 100X and 300X models, then the injunction against the TPS shall be at an end.

[143] I wish to repeat my thanks to all counsel for their most professional management of this very compressed motion and for the assistance which their written and oral submissions provided.

D. M. Brown J.

Date: June 25, 2010