

From the Ministries

SHANGHAI STARTS WAR ON NOISE

The municipal government of Shanghai has been investigating the effects of noise pollution on the general public and is preparing to take action to tackle the problem. In late July, the city authorities held a legislative hearing to draft regulations to control public noise. The regulations will centre on three major themes: whether to ban or otherwise control the use of portable loudspeakers in parks, squares and residential streets for physical exercise, prohibiting the refurbishment of residential buildings during specified hours, and limiting the use of loudspeakers at schools. However, the form these regulations will take is still unclear. Cai Jie, who represented the Zhabei district bureau at the hearing, admitted that at present the authorities can only attempt to dissuade residents

from the use of loudspeakers in parks and other public places because the regulations pertaining to noise pollution are opaque. “A noise inspection or patrol system can be established in areas that receive the highest number of complaints about noise pollution and the statistics could be made public every day. Meanwhile, the environmental protection departments should work closely with the police to set up a strict registration system to strictly observe promotional events or sports that may produce a large amount of noise pollution,” he suggested. Meanwhile, the word “negation” in the existing regulations intended to control noise pollution is ambiguous and can allow infringements to continue unchecked, according to Zhao Ye, deputy director of the administration committee of the Jiading Industrial Zone.

RUSSIAN CITY TO IMPOSE NIGHT NOISE FINES

A bill is before the St. Petersburg Legislative Assembly to outlaw “nocturnal screams and knockings” in addition to “whistling, the moving of

furniture, singing and the playing of musical instruments, as well as any other actions that disturb the peace and quiet at night.” The fine would also apply to residents whose pets make late-night noises. Fines of about \$1000 would be imposed on offenders.

NOISE BYLAW TO CONTROL TRAIL RIDERS

Norfolk County (Ontario, Canada) has adopted a bylaw that outlaws off-road “motorized conveyances” which generate noise levels louder than 94 decibels. Norfolk will also invest in sound-detecting equipment and training for the county’s bylaw enforcement staff. Noise bylaws tend to be technical and complicated because nuisance levels are subjective. The amendments to the county noise bylaw were approved with this in mind. Not only must off-road vehicles stay within the 94-decibel threshold, the noise they

make must fade to at least 45 decibels within 30 metres of a home. Also, off-road riding away from established trails must be confined to the hours between 7 a.m. and 9 p.m. on weekdays and Saturdays. The corresponding hours for Sundays and statutory holidays is from 9 a.m. to 9 p.m. This aspect of the bylaw remains controversial. However, the designated hours provision survived an attempt to modify. “I’m not going to support it,” said Simcoe Coun. Peter Black. “I don’t think it goes far enough. There are rural residents who are still going to be annoyed. When you have a motorcycle going around and around in

circles, you can't enjoy your property. You can't hear the birds sing. There are places people can go for this recreation. There are trails they can go to. The right to peace and quiet to me is the higher right." The bylaw amendments are worded to exclude riders of recreational vehicles who stick to established trail networks. Also the county bylaw does not trump provincial right-to-farm legislation which allows farmers to

make noise at all hours so long as it is part of a normal farming operation. Norfolk has adopted the 94-decibel threshold because this is the standard used by manufacturers of off-road vehicles. The total cost of outfitting the county's five bylaw officers is about \$2,000. There will also be ongoing calibration costs to ensure the devices produce accurate readings.

REVISED NOISE ORDINANCE APPROVED

Galveston city council has approved changes in the noise ordinance that limit sound produced to 85 decibels and provide police with measurable methods of enforcing that law. The 85 decibel limit applies to both residential and nonresidential areas from 7 a.m. until 10 p.m. The limit is lowered to 80 decibels in residential areas after 10 p.m. The ordinance allows police to measure the sound at the point of complaint, rather than at the point of origin. Council members said the original intent of the amendments was to prevent unwelcome noise from

invading others' property. The amendments also were designed to prevent someone from abusing the complaint system. Police officers at the meeting approved of the latest draft of the ordinance because it allowed them to use personal discretion on a case-by-case basis and also equipped them with decibel readers. Steve Everts spoke on behalf of the Bar and Tavern Association when he thanked the council for finally passing a noise ordinance. "We've been asking for this for three years," Everts said. "We wanted something to tell those of us in the entertainment district when we're not within the law."

AIRPORT CAN'T LIMIT ITS SIZE

At a recent meeting, Bellingham (WA) residents complained about the growing noise from Bellingham airport, the nuisance as well as damage to property values. The airport has grown substantially, up from 80,000 outbound passengers in 2004, to over 500,000 in 2011. But airport representative John Yarnish pointed out that the airport

could not limit growth even if it wanted to, out of neighbourliness. "Managed growth is inconsistent with FAA policy," he said. As the airport operates under FAA funding and regulations, it is obliged to accommodate demand. That means if more airlines want to use Bellingham, locals just have to put up with the extra noise.

AIRPORT NOISE BILL REJECTED

Australia's Federal Parliament has rejected a WA-sponsored private member's Bill that would have created the position of an aircraft noise adviser to give impartial advice to residents and guarantee public consultation processes. The Bill was introduced by Judi Moylan and Steve Irons last year after the Federal Government rejected the

recommendations of the Senate inquiry into Perth aircraft noise. It would have reopened the planning process for Perth's flight paths. Ms Moylan, the member for Pearce, said the Government had voted against consultation, ignoring the genuine concerns of the public. "We've seen the effects of no consultation: hundreds of complaints and a damning Senate inquiry, yet the

Government thinks there is nothing wrong,” Ms Moylan said. Mr Irons, the member for Swan, said the vote was a bitter disappointment for his

constituents and a final indication that Labor and the Federal Government would do nothing to address aircraft noise in Perth.

MEASURE AIRCRAFT NOISE YOURSELF

Smartphone users will be able to measure the noise of planes flying overhead thanks to new technology. University College London (UCL) has been carrying out research into Widenoise, a free application for Androids or iPhones. Campaign group Hacan Clearskies, which launched a trial in Isleworth, encouraged people living under Heathrow’s flight paths to measure noise levels to help create an online map of the disturbance. Joe Ryle, project community officer at UCL, said: “What makes this project exciting is that it gives communities the capability of doing something about the problem of noise pollution themselves by collecting their own noise readings. “If the project is successful we could have thousands of people under the Heathrow flight path doing something to combat their concerns around noise from planes.”

A NEW GENERATION OF ACOUSTIC MEASUREMENTS

NPL scientists have made the first measurements of airborne acoustic free-field pressures using a laser technique based on photon correlation spectroscopy. This optical measurement technique directly measures particle velocities and realises the acoustic pascal - the SI derived unit of pressure - and could potentially be used to calibrate microphones. It is being developed as part of a wider initiative to base future primary acoustic standards on optical methods. The new technique uses two lasers that are set up so that their beams intersect at a point in space and produce an interference fringe pattern. When sound is produced by a source (such as a loudspeaker), the intensity of light scattered by particles in the air as they pass through the fringe pattern changes. This intensity change can be detected, and the acoustic free-field pressure calculated. The current method for calibrating microphones relies on their reciprocal nature. Part of the process requires one microphone to be used as a sound source and coupled to a second receiving microphone. This set-up, together with complex modelling of the acoustic coupling between the microphone sensitivities, eventually leads to an evaluation of the microphone sensitivity, which is then traceable to a number of dimensional and electrical quantities. However, this method imposes limits on the types of microphone which can be calibrated, meaning that non-standard microphones and new technologies such as MEMS (microelectromechanical) sensors cannot be tested and calibrated. Optical techniques are the solution to this problem due to their ability to directly measure the pascal at a point within a sound field. Research will continue at NPL on developing optical methods that are robust and accurate enough to one day become the primary measurement standards that support sound pressure measurements. The use of optical techniques and the improved calibration they offer may also help to accelerate the development of new microphone technologies and other acoustic devices. More info: National Physical Laboratory, Hampton Road, Teddington, Middlesex, TW11 0LW Tel: +44(0)20 8977 3222

SOLAR NOISE BARRIERS: SELF-FINANCING

A group of Oxfordshire residents proposing to tackle noise pollution with solar-powered barriers have won a competition to help make it a reality. The Co-operative and the Centre for Sustainable Energy have awarded the M40 Chilterns Environmental Group and six others £200,000. Dr Ken Edwards, chair of the group, said: "Now we believe we can begin to tackle this needless noise." They plan to install the barriers along a 20 mile (32km) stretch of the M40. Dr Edwards added: "Our proposal stemmed from addressing the question of how to make noise reduction barriers self-financing and we believe that our solution is win, win, win. It will improve the quality of life for local communities, will offset installation costs, and benefit the environment."

THE LAST OF THE COCKNEYS

New-born Cockneys are becoming an endangered species because the area in which the Bow Bells can be heard has shrunk, acoustics researchers claim. According to London tradition, Cockneys are born within earshot of the bells of St Mary-le-Bow Church, Cheapside. In 1851, the bells could be heard across north and east London, even audible south of the Thames. However, according to 24 Acoustics, chimes can now only be heard in the City of London and Shoreditch. The bells reputedly inspired Dick Whittington to "turn again" at a spot in what is now Archway, north Islington, and return to London where he eventually became Lord Mayor. And in the year of Prince Albert's Great Exhibition in 1851, the bells could be heard across Islington, Hackney, Tower Hamlets, Newham, Waltham Forest and even into parts of Camden and Southwark. However now, the researchers suggest no true Cockneys may ever be born again - as the only hospital in the area of audibility has no maternity ward on site. The reach of the Bow Bells is affected by the ambient noise level, which was significantly lower 150 years ago before the widespread use of motor vehicles. Also, an increase in buildings in the area has further limited the ability of the noise to carry.

REPUBLIC OF KOREA NAVY ORDERS THALES' ADVANCED ACOUSTIC GENERATORS

Thales has been awarded a contract to supply minesweeping equipment for the Republic of Korea Navy's (ROKN) new Mine Sweeper Hunters. The contract is for the supply of three ship sets of Advanced Acoustic Generators (AAGs) from Thales in Australia. Jean Pellegrin, Thales Country Director South Korea, said: "The ROKN has committed to having the most advanced minesweeping technology, which is also in service with the Royal Australian Navy, the United States Navy, and two other navies." "As new mine-related threats emerge, it is vitally important to deploy cutting-edge systems that deliver innovative and flexible capabilities to friendly naval forces on operations. We are extremely proud to be a part of the ROKN's capability in this area." Chris Jenkins, Thales Australia's CEO, said: "This technology is the result of close cooperation with Australia's Defence Science and Technology Organisation (DSTO), as well as a long term investment to develop innovative, specialised solutions at our facility in Sydney, Australia. We believe the AAG is well suited to the export market, and this contract reflects growing international interest in our minesweeping systems." The AAG is at the forefront of mine countermeasures technology. A water driven, turbine powered acoustic generator that emulates ship noise, it can be integrated with any sweep system. Originally developed by Thales Australia in conjunction with Adelaide-based SME Resonance Technology, and with the collaboration of DSTO, it meets a global need for sophisticated minesweeping products. More info: Thales Australia, Julian Elliott Tel +61(0)2 9562 3716 julian.elliott@thalesgroup.com.au