

The many risks of this building frenzy - John Fenech

March 15, 2021 | John Fenech | 103 min read



From noise to dust, the myriad problems this construction boom is causing

The construction industry is one of the country's worst polluters. Demolition and excavation cause dust, noise, vibrations, air and waste pollution.

Around 11,150 permits have been approved every year since 2017. Most of these building projects affected the northern harbour district and, to a lesser extent, the northern and western districts. Urban areas in these localities experience 16 hours per

Photo: Shutterstock

day of intense pollution. As if this is not enough, they face disruption of their daily life and the possibility of damage to their property and, indeed, their own lives.

Housing quality concerns not only the dwelling itself but also the nearby physical environment, including green and open spaces. It also includes making the environment more conducive to a healthy lifestyle. In a building frenzy, none of this is possible. It is time that permits are regulated according to the existing building stock, especially in high density built-up areas.

Demolition, excavation, stone extraction and batching plants all release huge amounts of dust into the air. This windblown dust remains in the air for days and gets carried over urban areas, causing coughing, wheezing and asthma.

Construction and demolition waste constitute 80 per cent of all waste generated in Malta. For instance, 9,000 approved permits in 2017 generated 2.2 million tonnes of such waste. Around 1.5 million tonnes of stone is quarried every year. Both of these are major sources of particulate matter. So, too, is the exhaust from diesel-powered construction equipment.

There are ways to control dust using water spray, dust extractors and netting covers. Particulate filters and catalyst converters will also drastically reduce particulate matter.

Noise is a hazard to health and well-being

Noise is not a nuisance, it is a hazard to health and well-being. Exposure to chronic noise exceeding 85 decibels can cause hearing impairment. Another less-known hazard is the effect of non-auditory noise, that is, noise of less than 70 decibels.

There are several ways to reduce noise from construction sites. Noise barriers can be installed between the noise source and the resident's dwelling. Sound proofing enclosures can reduce noise from pneumatic tools. Idle machinery can be switched off. Air silencers can be installed on pneumatic tools. According to construction regulations, noise levels between 2pm and 4pm must not exceed 65 decibels.

Noise from construction activity in European countries is regulated not to exceed 10 decibels above ambient noise throughout the day. WHO community noise guidelines state that, during the day, noise levels must not exceed 55 decibels when measured outside a resident's façade.

Direct exposure to vibrations can cause lower back pain, tingling and the loss of sensation in the fingers, loss of light touch and hand-arm vibration syndrome.

There are several laws that regulate various forms of pollution. Noise pollution, however, cannot be effectively regulated unless the law includes objective noise limit thresholds and assessment procedures as nuisance is difficult to prove given its subjective nature.

Excavation failures are dangerous because they may occur quickly and limit the time to escape, especially if the collapse is extensive. It is time for the construction industry to modernise demolition and excavation methods to reduce pollution and safeguard residents' life and well-being.

Introducing technologies which have been on the market for some time would be a win-win solution for the industry, residents and the environment.

Hybrid technology for diggers and excavators with diesel engines will drastically reduce carbon emissions.

Hydraulic rock splitting technology is dust and vibration free and almost noiseless. It will drastically reduce the impact on the environment, eliminate chronic noise and protect buildings from structural damage, caused by vibrations during excavation.

The drafting of new laws does not resolve the issue, as experienced by the failure of the 2019 regulations intended to protect third parties. Good work practice, modern equipment and competent management on the construction site is the only solution to ensure an even playing field for all stakeholders.

John Fenech is chairman of the Noise Abatement Society of Malta