

# Regular cleaning a must for high-rise water tanks

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Rust, dirt inside structures could result in murky water and health risks, experts warn

A VIDEO showing slimy muck at the bottom of a drained water storage tank in a high-rise building highlights how important it is to clean the facility regularly.

The video revealed rusty panels and workers handling thick brown sludge that had settled at the bottom of the water tank.

A voiceover said drinking water from this tank might make people sick.

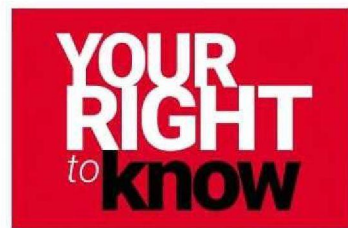
Layers of rust had accumulated at pipe openings, wall panels and brackets inside the tank.

"Is this the kind of quality we are getting for our drinking water?" was one of the comments that greeted the video.

It also got the attention of Tanjung Aru assemblyman Datuk Junz Wong from Sabah who posted it on his social media page.

"Many water tanks are in similar condition.

"Let's hope the relevant authorities can take the necessary action," he wrote.



(Above) Cleaning work being carried out on a fibreglass-reinforced plastic tank. (Inset) A still from the viral video of sludge found at the bottom of a water tank.

## Mammoth cleaning effort

When contacted, Sevenstar Water Tank Solution managing director Khairul Ariff Othaman confirmed uploading the video on April 19.

Preferring not to divulge the name of the high-rise other than the fact that it was somewhere in Ampang, Selangor, Khairul said his company had been commissioned by the property's management to refurbish the water tank.

"It was a water storage facility for a residential-cum-commercial high-rise building.

"The sludge seen on the video had built up over the past 25 years," said Khairul.

He explained that it was the result of sedimentation as well as rust coming from the metal pipes, suction tank and steel panels.

Works involved scrubbing the rusted parts, cleaning, changing the interior bracket and angles and application of anti-rust solution, finished with protective food-grade coating.

The cleaning and refurbishment of the 158 cubic metre tank cost about RM30,000, said Khairul.

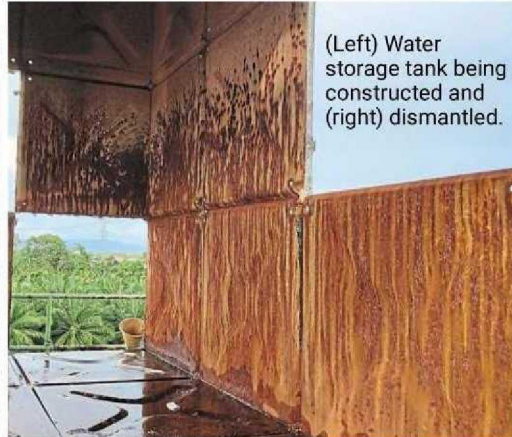
"I put up the post to raise awareness of the importance of regular maintenance, as the water, together with the rust and dirt, will be going into our bodies," he said.

Khairul said hospitals usually showed the most diligence when it came to regular cleaning of water storage tanks.

"The ratio of landed properties calling for washing services from my company in a year is one out of 10. For condominiums, it is four out of 10.

"Most times, management will only react when they receive complaints of murky water coming from taps," he said.

Regular washing, inspection and maintenance of water stor-



(Left) Water storage tank being constructed and (right) dismantled.

age tanks were an important component in building property management but was often overlooked, said a joint management body (JMB) member of a condominium in Kuala Lumpur.

"The tank is usually located on the rooftop so it is very much a case of 'out of sight, out of mind'.

"Usually, action is only taken when there is a leak," he said.

The JMB member, who did not want to be named, said the cleaning and maintenance of water tanks should come under some form of policing by government bodies.

"It should not be left entirely to JMBs or management corporations (MCs)."

Ideally, he said, checking should be done every 12 months, while old steel tanks should have their interiors lined with thermoplastic polymer (HDPE) to prevent drinking water from coming into contact with rust.

He also recommends metals pipes be changed to ones made from HDPE as they were rust-proof.

When contacted, Selangor housing and culture committee chairman Borhan Aman Shah

said responsibility for water storage tanks in housing areas rested with property developers during the construction phase and subsequently, the JMB or MC after completion.

He said under Strata Management Act 2013 (Act 757), JMBs or MCs were responsible for the management, maintenance and administration of common property, which might include water storage tanks in housing areas.

## Clean water supply

Association of Water and Energy Research Malaysia (Awer) president Piarapakaran Subramaniam noted that the only supply of water for residents in high-rises came from storage tanks.

"Landed properties have direct pipes from water companies running to their kitchen taps but high-rise dwellers have no access to fresh water," said Piarapakaran.

As such, residents must alert their respective JMBs or MCs the moment they see murky water from their taps, he said.

"They must appoint a certified

contractor to get the cleaning done.

"The contractor should also be responsible for liaising with water companies as well as inform residents that supply will be disrupted during the maintenance period.

"The tanks should be sterilised before they are cleared for operation," he said.

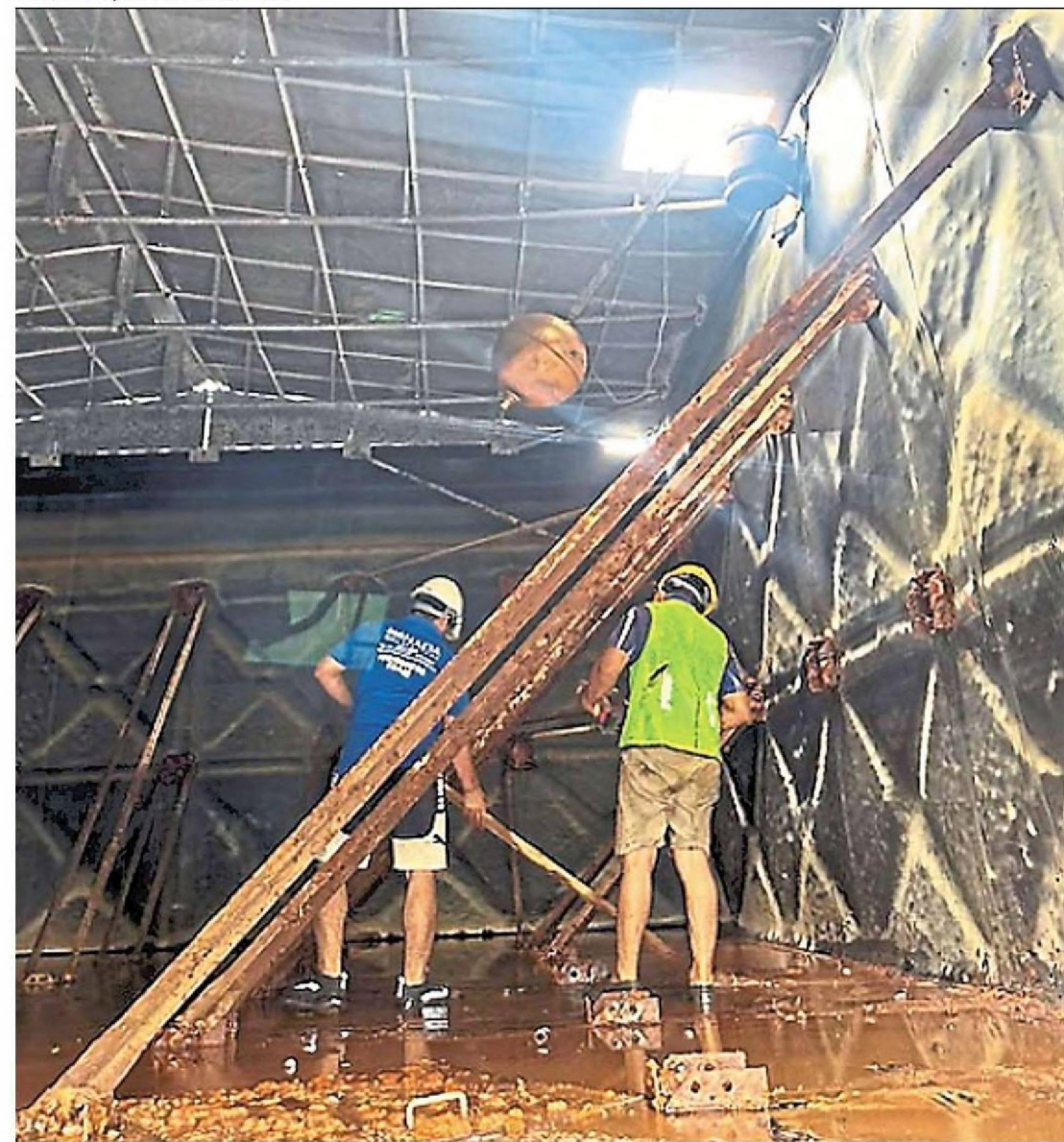
Piarapakaran said in 2009 and 2010, a few meetings were held between water companies, several building management companies and government agencies on the need for better regulations governing water storage tanks in high-rises.

"It was to discuss mandatory requirements which will serve as rules under National Water Services Commission (SPAN) where water companies will take over the responsibility of maintaining water tanks in high-rises.

"Currently, water bills do not include the cost of such maintenance.

"If this is agreed upon, the maintenance schedule would become more uniform," said Piarapakaran.

So far, he said, no decision had been made on the issue.



The bottom of a water storage tank filled with sedimentation.



Khairul: Sludge in condominium tank was the result of build-up over 25 years.



Piarapakaran: High-rise residents have to rely on storage tanks for their water.



Mohd Fazli: Water services act does not cover cleaning of water tanks for private assets.

## Suitable materials a must

Piarapakaran said unless the water had been contaminated by external materials such as dead animals, rainwater or sewage matter seeping into the tank due to decayed linings, little harm could come from drinking water from a tank that had not been cleaned regularly.

"This is because our water is chlorinated to prevent microorganism growth.

"Consumers generally do not drink from their taps when the water is murky.

"As for rust, it is oxidised iron and does not dissolve in water," he said.

He also said that materials used in the construction of water tanks must be approved by SPAN.

"Sometimes storage tanks are exposed to direct sunlight and we do not want the materials used to leach any chemicals into treated water.

"SPAN has its research and

development division. Therefore, if new materials are available, SPAN should proactively look into its usage in infrastructure development."

## Ensuring good water quality

SPAN director of corporate communication and consumer affairs Mohd Fazli Ismail said if a complaint was received regarding water quality, the agency would check at the user's meter point.

"If it involves a high-rise building, then a site visit will be done with the complainant, water operator and JMB or MC.

"They will do an inspection and physical tests for turbidity and chlorine," he said.

However, Water Services Industry Act 2006 (Act 655) does not cover cleaning of water tanks for private assets.

Mohd Fazli said this matter would be addressed under a proposed safe drinking water Bill

under the Health Ministry.

SPAN does have recognised standards for storage cisterns, which vary depending on their material and intended use.

The commission regulates suppliers of products used in the water service industry through registration.

It may, through written notice, suspend or revoke a supplier's registration certificate for non-compliance.

Kuala Lumpur City Hall (DBKL) in a statement said water tank cleaning works, inspections as well as maintenance at 64 people's housing projects (PPR) under its purview were carried out every six months by its Community Development and Urban Well-being Department.

"If there is dirt or leakage, cleaning or repair work will be carried out," it said.

The list of active water suppliers can be viewed at [www.span.gov.my/category/view/48](http://www.span.gov.my/category/view/48)