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COMPLEX WARREN: Two-lane wide roads, as seen here, at the SAF underground facility, link caverns where ammunition will be stored.

# Singapore's ammo stored safely – underground

## Opening of huge caverns at Mandai frees up space above

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THE underground home to some of the Singapore Armed Forces' most lethal munitions was opened yesterday in Mandai, offering land-scarce Singapore new frontiers to grow.

This warren of warehouse caverns, each large enough to hold six basketball courts, is where bullets, shells, bombs and missiles will be stored.

The caverns are protected by armoured doors and linked by tunnels 13m high and the width of two road lanes. Vehi-

cles as large as container trucks will be able to move quickly through the complex.

Data from the Ministry of Defence said this ensures the SAF can retrieve and load supplies rapidly during operations.

Speaking at the commissioning of the Underground Ammunition Facility (UAF) yesterday, Minister for Defence Teo Chee Hean noted that the facility would free up 300ha of land – half the size of Pasir Ris Town – and need 20 per cent less manpower to operate than conventional above-ground facilities.

If the facility sat at ground level, it would have eaten up 90 per cent more land because it would have required tracts of land as safety buffers around it.

The complex was created by blasting caverns out of solid granite under the disused Mandai Quarry off the Bukit Timah

Expressway. For security reasons, Mindef did not reveal the number of caverns created, or how far down they lay.

The rock-solid granite would be able to “contain the risks associated with ammunition storage”, said Mr Teo.

The land above the caverns and the nearby forest area were left intact and will be used as a training ground by the SAF.

Moving the facility underground has also freed up the Seltar East Ammunition Depot, which was where the SAF's ammunition dump was located.

The depot has been decommissioned and handed back to Singapore's urban planners.

The minister lauded the Defence Science & Technology Agency, the project's team leader, the SAF Ammunition Command, the National University of Singapore, the Nanyang

Technological University and consultants from Norway, Sweden and the United States and SembCorp Industries, which built the tunnels.

He said that the caverns had set new international standards in underground storage safety.

This complex is not Singapore's only underground facility. Urban planners looking to maximise land use have a sewer network and storage facilities beneath Jurong Island among upcoming projects.

JTC Corp said yesterday that it broke ground in February last year for hydrocarbons storage under Jurong Island.

It said the Jurong Rock Cavern, South-East Asia's first such facility, was “an innovative solution to meet the competitive demand for the limited land resource in Jurong Island”.

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