

# Rail lines to be ‘delinked’ in disruptions

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## Disconnecting electrical supply between North-South and East-West lines limits impact of any breakdown

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### WORTHWHILE INVESTMENT

Such delinking efforts will incur cost, but it is a worthwhile investment where system resiliency can be significantly improved.



**ASSISTANT PROFESSOR RAYMOND ONG GHIM PING**, from NUS' Department of Civil and Environmental Engineering

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### Calvin Yang

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To avoid a repeat of the network-wide rail disruption on July 7, the electrical connections between the North-South and East-West lines will be “delinked” when the need arises.

This means that the electrical supply between the two major rail lines can be disconnected if one line is down, allowing the other to continue functioning as normal.

The Land Transport Authority (LTA) and rail operator SMRT will be installing electrical breaks at two MRT interchange stations – Ju-

rong East and Raffles Place, wrote Transport Minister Khaw Boon Wan in a blog post yesterday.

The MRT network was hit by its worst disruption on July 7, when a breakdown crippled both train lines during the evening peak period. SMRT was fined a record \$5.4 million for the disruption caused by electrical power trips at multiple locations in the network. Mr Khaw noted that the disruption was a “disaster because of its scale”.

In a reply to questions from The Straits Times, the LTA said delinking the two rail lines involves cutting the running rail and putting in bonded insulated rail joints at the point of disconnection.

“When a rail incident occurs and there is a need to delink the two rail lines, SMRT staff can disconnect the cables and operate each line

separately,” the authority added.

Mr Khaw said: “Under normal operations, these (electrical) breaks will not be activated as we want to continue to have the flexibility between the North-South and East-West lines.”

According to LTA, the lines were electrically linked to allow trains to move between both rail lines.

“The link was, and still is, essential as Bishan Depot on the North-South Line is the only depot across the two lines with heavy maintenance and overhaul capability,” Mr Khaw added.

“Other than for maintenance, allowing cross-overs gives operational flexibility. Unfortunately, this also means that a power fault on one line could affect the other.”

In the early 1980s, a decision was made to set up one such depot to

minimise costs and land use. Mr Khaw, however, noted that the Tuas West Depot on the East-West Line will be ready when the Tuas West Extension is completed next year.

The installation of the electrical breaks will be completed by the end of next month.

Assistant Professor Raymond Ong Ghim Ping, from the Department of Civil and Environmental Engineering at the National University of Singapore, said the move limits the impact of a breakdown.

“Users can hence expect a shorter delay when the efforts to delink the system are completed,” he added. “Such delinking efforts will incur cost, but it is a worthwhile investment where system resiliency can be significantly improved.”

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