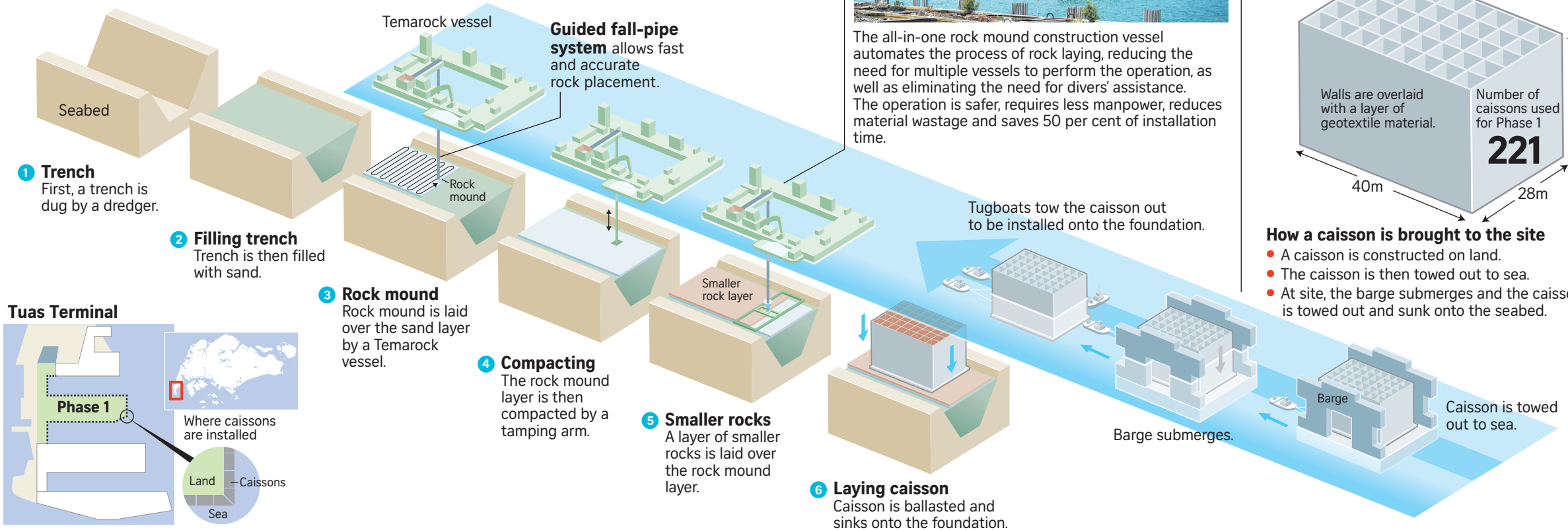
Installing the caisson seawall

Before a port is built, a seawall must be constructed using caissons, which are huge watertight concrete structures. A foundation consisting of layers of rock and sand must first be laid for the seawall to sit on.

BY THE NUMBERS

Cost of Phase 1	Project completion	Port land created	Amount of cargo Phase 1 can handle
$2.42b	2021	414ha	20m (TEUs) 20 ft equivalent units



Tuas Terminal

TEMAROCK VESSEL

The all-in-one rock mound construction vessel automates the process of rock laying, reducing the need for multiple vessels to perform the operation, as well as eliminating the need for divers' assistance. The operation is safer, requires less manpower, reduces material wastage and saves 50 per cent of installation time.

THE CAISSON

A caisson is a large watertight structure of reinforced concrete. It is used as part of a quay wall in the construction of the Tuas Terminal. Each caisson weighs 15,000 tonnes, or equivalent to 34 Boeing 747-8s.

How a caisson is brought to the site

- A caisson is constructed on land.
- The caisson is then towed out to sea.
- At site, the barge submerges and the caisson is towed out and sunk onto the seabed.

Source: MPA SINGAPORE ST PHOTO: LIM YAOHUI GRAPHICS: LEE HUP KHENG