

An MND Statutory Board

In Collaboration With







Our Ref: APPBCA-2022-23

01 Dec 2022

For enquiries, please contact: Building Engineering Group (#12-01) Tel.: 1800 3425 222 (1800-DIAL-BCA) or use our Online Feedback Form at: https://www.bca.gov.sg/feedbackform/

#### See Distribution List

Dear Sir / Madam

# JOINT BCA/HDB/JTC/LTA CIRCULAR - USE OF 100% GRANITE FINES AS SUBSTITUTE FOR NATURAL SAND IN CONCRETE

## Objective

This circular aims to update the industry on the use of 100% granite fines as substitute for natural sand in concrete.

### **Background**

2 In 2007 and 2019, BCA shared with the industry that replacement of natural sand with granite fines in concrete production is allowed in SS EN 12620. To give confidence to the industry on the use of granite fines, we wish to highlight that a recent study carried out under the MND's Cities of Tomorrow (CoT) programme concluded that the use of 100% granite fines can achieve the desired performance required of the concrete in relation to workability. Strength classes up to C50/60 were studied and the study confirms that concrete produced using 100% granite fines has comparable, if not better performance in some properties to that of natural sand concrete.

#### Use Of 100% Granite Fines in Concrete

- 3 For your information, granite fines have been successfully used in Singapore in various building projects and is regarded as the more sustainable alternative way forward. The Institution of Engineers, Singapore (IES) and Association of Consulting Engineers Singapore (ACES) are supportive of this initiative.
- 4 It is noted that Government Procurement Entities (GPEs) such as HDB, LTA, and JTC also support the replacement of up to 100% of granite fines in their projects. Furthermore, ready-mixed concrete producers have the capabilities to move towards higher substitution of natural sand with granite fines



in concrete production. Hence, BCA would like to encourage the industry to adopt more granite fines in their projects.

### **For Clarification**

We would appreciate it if you could bring to the attention of your members the content of this circular. The study report and specification on the use of granite fines are available at <a href="https://www1.bca.gov.sg/regulatory-info/essential-construction-materials/technical-publications">https://www1.bca.gov.sg/regulatory-info/essential-construction-materials/technical-publications</a>

QPs may wish to be familiarised with these documents for the use of granite fines in concrete. Should you need any clarification, please submit your enquiry through BCA's Online Feedback Form at <a href="https://www.bca.gov.sg/feedbackform/">https://www.bca.gov.sg/feedbackform/</a> or call us at 1800 342 5222.

Yours faithfully

Charlen ..

\_\_\_\_\_

ER. LUNG HIAN HAO
DIRECTOR
BUILDING ENGINEERING GROUP
BUILDING AND CONSTRUCTION AUTHORITY
for COMMISIONER OF BUILDING CONTROL

ER. MDM TEH POH SUAN

DIRECTOR
ENGINEERING SERVICES DEPARTMENT
BUILDING INFRASTRUCTURE GROUP
HOUSING AND DEVELOPMENT BOARD

MS TAN SU CHERN

DIRECTOR
TECHNICAL SERVICES DIVISION
JTC CORPORATION

ER. KUMARASAMY JEYATHARAN
DIRECTOR

CIVIL DESIGN & LAND SUBGROUP for CHIEF EXECUTIVE LAND TRANSPORT AUTHORITY



#### **DISTRIBUTION LIST**

# **ASSOCIATIONS / SOCIETIES**

**PRESIDENT** INSTITUTION OF ENGINEERS, SINGAPORE (IES) 70 BUKIT TINGGI ROAD SINGAPORE 289758

**PRESIDENT** ASSOCIATION OF CONSULTING ENGINEERS, SINGAPORE (ACES) 18 SIN MING LANE #06-01 MIDVIEW CITY SINGAPORE 573960

**PRESIDENT** SINGAPORE CONTRACTORS ASSOCIATION LIMITED (SCAL) **CONSTRUCTION HOUSE** 1 BUKIT MERAH LANE 2 SINGAPORE 159760

**PRESIDENT** SINGAPORE INSTITUTE OF ARCHITECTS (SIA) 79 NEIL ROAD SINGAPORE 088904

**PRESIDENT** SOCIETY OF PROJECT MANAGERS (SPM) 168 JALAN BUKIT MERAH CONNECTION ONE #10-01 SINGAPORE 150168 C/O SIPM CONSULTANTS PTE LTD

**PRESIDENT** SINGAPORE INSTITUTE OF BUILDING LIMITED (SIBL) 9, AH HOOD ROAD #02-04 SINGAPORE 329975

**PRESIDENT** REAL ESTATE DEVELOPERS' ASSOCIATION OF SINGAPORE (REDAS) 190 CLEMENCEAU AVENUE #07-01 SINGAPORE SHOPPING CENTRE SINGAPORE 239924

**PRESIDENT** SINGAPORE INSTITUTE OF SURVEYORS & VALUERS (SISV) 110 MIDDLE ROAD #09-00 CHIAT HONG BUILDING SINGAPORE 188968



**PRESIDENT** SINGAPORE STRUCTURAL STEEL SOCIETY (SSSS) 1 LIANG SEAH STREET #02-11/12 LIANG SEAH PLACE SINGAPORE 189022

**PRESIDENT** GEOTECHNICAL SOCIETY OF SINGAPORE (GEOSS) C/O GLOBEWERKS INTERNATIONAL PTE LTD 22 SIN MING LANE #03-85 MIDVIEW CITY SINGAPORE 573969

**PRESIDENT** PROFESSIONAL ENGINEERS BOARD, SINGAPORE (PEB) 52 JURONG GATEWAY ROAD, #07-03 SINGAPORE 608550

**PRESIDENT BOARD OF ARCHITECTS (BOA) 5 MAXWELL ROAD** 1ST STOREY TOWER BLOCK MND COMPLEX SINGAPORE 069110

**DIRECTOR OF INFRASTRUCTURE** INFRASTRUCTURE AND FACILITIES SERVICES DIVISION SCHOOL CAMPUS DEPARTMENT MINISTRY OF EDUCATION 285 GHIM MOH ROAD, BLOCK C, LEVEL 3 SINGAPORE 279622

DIRECTOR PROCUREMENT & CONTRACTS DEPARTMENT **PUBLIC UTILITIES BOARD** 40 SCOTTS ROAD #08-01 **ENVIRONMENT BUILDING** SINGAPORE 228231

**DEPUTY CHIEF EXECUTIVE INFRASTRUCTURE & DEVELOPMENT** LAND TRANSPORT AUTHORITY 1 HAMPSHIRE ROAD **BLOCK 8 LEVEL 1** SINGAPORE 219428



**DIRECTOR** 

ENGINEERING SERVICES DEPARTMENT BUILDING AND INFRASTRUCTURE GROUP HOUSING & DEVELOPMENT BOARD HDB HUB 480 LORONG 6 TOA PAYOH SINGAPORE 310480

**DIRECTOR** 

TECHNICAL SERVICES DIVISION
JTC CORPORATION
THE JTC SUMMIT
8 JURONG TOWN HALL ROAD
SINGAPORE 609434

DIRECTOR
BUILDING
PEOPLE'S ASSOCIATION
9 STADIUM LINK
SINGAPORE 397750

**PRESIDENT** 

THE TUNNELLING AND UNDERGROUND CONSTRUCTION SOCIETY SINGAPORE (TUCSS) C/O CMA INTERNATIONAL CONSULTANTS PTE LTD 1 LIANG SEAH STREET #02-12 LIANG SEAH PLACE SINGAPORE 189022

**PRESIDENT** 

SOCIETY OF ROCK MECHANICS AND ENGINEERING GEOLOGY 1 LIANG SEAH STREET #02-12 LIANG SEAH PLACE SINGAPORE 189022

DEPUTY CHIEF EXECUTIVE OFFICER SENTOSA DEVELOPMENT CORPORATION 33 ALLANBROOKE ROAD, SENTOSA SINGAPORE 099981

HEAD (FIRE SAFETY AND BUILDING CONTROL)
BUILDING AND INFRASTRUCTURE
DEFENCE SCIENCE & TECHNOLOGY AGENCY
1 DEPOT ROAD
DEFENCE TECHNOLOGY TOWER A
SINGAPORE 109679

DIRECTOR
BUILDING AND INFRASTRUCTURE



**DEFENCE SCIENCE & TECHNOLOGY AGENCY** 1 DEPOT ROAD **DEFENCE TECHNOLOGY TOWER A** SINGAPORE 109679

**PRESIDENT** SINGAPORE GREEN BUILDING COUNCIL BLOCK H, LEVEL 2 **BCA BRADDELL CAMPUS** 200 BRADDELL ROAD SINGAPORE 579700

SPECIALISTS TRADE ALLIANCE OF SINGAPORE (STAS) 23 GENTING ROAD #07-01 CHEVALIER HOUSE SINGAPORE 349481

SINGAPORE INTERNATIONAL FACILITY MANAGEMENT ASSOCIATION (SIFMA) BLK 201 KIM TIAN ROAD #03-400 SINGAPORE 160201

ASSOCIATION OF PROPERTY AND FACILITY MANAGERS (APFM) 110 MIDDLE ROAD #09-00 CHIAT HONG BUILDING SINGAPORE 188968

ALL CORENET E-INFO SUBSCRIBERS

