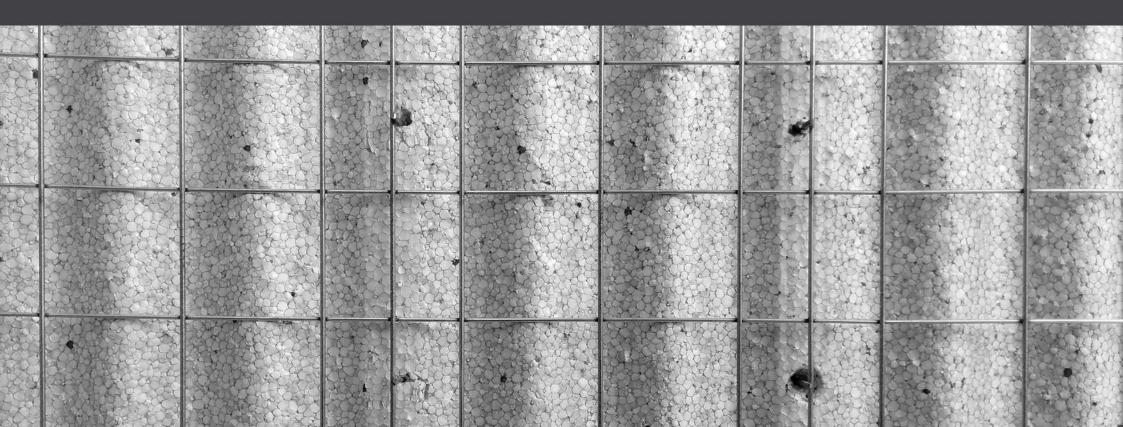


COMPANY **PROFILE** 

www.buildscape.my

# MY BUILDINGS WILL BE MY LEGACY. THEY WILL SPEAK FOR ME, LONG AFTER I'M GONE.

Jullia Morgan



# **TABLE OF**

# **CONTENTS**

01	ABOUT US Our Vision   Our Mission   Our Team
02	OUR SERVICES
03	PRODUCTION Factory   Machinery
04	PRODUCT RANGE b-panel®   b-foam®
05	PROCESS Supply   Installation
06	PROJECT REFERENCES Completed   Current
07	CONTACT US Office   Factory

We're professional & passionate people that love what we do & never stop doing amazing, innovative things.

# **ABOUT US**

Established in 2014, **BuildScape** was founded on the principle of introducing highly efficient, environmentally sustainable yet economical construction systems to the local Malaysia building sector.

Certified by the Construction Industry Board of Malaysia (CIDB) as an Industrialised Building System (IBS) company, we have strongly supported the efforts of both the Malaysian government and its private sector, in delivering affordable housing to the Malaysian public.

Our principal building technology, **b-panel**® posesses the versatility and consistency to blend seamlessly with the current demands for quality design as well as higher built and safety standards.



# **OUR VISION**

**BuildScape** aspires and strives to be a leader in modular construction manufacturing and project implementation, for both Malaysia and global markets.

# **OUR MISSION**

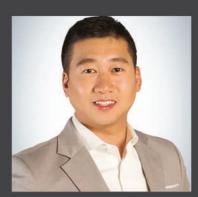
BuildScape aims to facilitate and enable opportunities for project stakeholders to make environmentally conscious and profitable decisions that have the potential to create sustainable living environments.



CHAIRMAN Foo Fatt Chuen



PROJECT DIRECTOR Lionel Lim



**EXECUTIVE DIRECTOR**Robin Ang



FINANCE DIRECTOR Terry Law

# **OUR SERVICES**

### **BUILDSCAPE SDN BHD**

CIDB Malaysia Report No. FSL150915IBSC0505

IBS status company that manufactures the following IBS component(s):-

SISTEM BERINOVATIF: SANDWICH PANEL (INSITU)

## **NURWALI SEPADU SDN BHD**

CIDB Malaysia Registration No. 0120030422-SL082788

Grade

G7 B B04 B02 B13 B24 B10 B12 B14

G7 CE CE21 CE01 CE06 CE43 CE42 CE31 CE10 CE13 CE20 CE34 CE36



**BuildScape** actively participates in tradeshows across the country, notably Archidex as part of our strategy to promote **b-panel® building systems** to industry professionals and the average consumer.



# PT BETON ELEMENINDO PUTRA

The only Expanded Polystyrene (EPS) manufacturer in Indonesia with expertise in providing solutions in building technology e.g. thermal insulation, technology infrastructure, floating structures and ultra-light architectural facades.









# **PRODUCTION**

The Kementerian Kesejahteraan Bandar, Perumahan dan Kerajaan Tempatan (KPKT) was invited to visit our factory in Klang.

## **FACTORY**

We regularly conduct hands-on training sessions to equipped our site and production staff with the necessary skills to ensure that optimum quality control is consistently delivered. We constantly encourage our staff to practised the highest health and safety standards when operating machinery in the factory and on-site.









## **FUTURE FACTORY & MACHINERY**

**BuildScape** is rapidly expanding into global and local markets. We are in the midst of formalizing plans to open two more factories - one in Pajam (Negeri Sembilan) and another in Yangon (Myanmar) by 2018.









# b-foam® EPS Fire-Retardant layer density: <1% of concrete Reinforced Plaster Microcolumns U-50 Hightensile wire mesh partition / non-structural (b-Lite\*) Structural b-panel\* plastered Plastered M-225 M-150

# b-panel®

**b-panel**® is a concrete sandwich panel building system, insulated with **b-foam**® fire-retardant Expanded Polystyrene (EPS) layer. It offers excellent thermal & acoustic insulation, and exceptional typhoon & earthquake resistance.

b-panel® has excellent strength-to-weight ratio, due to hundreds of continuously-linked micro-columns within its concrete layers, whereas its ultra-light EPS layer is less than 1/100 density of concrete.

# **Technical specifications**

#### Panel sizes

- · Modular cutting list (panels delivered cut to size and shape according to your drawings)
- · Can be ordered in typical modules 1.2 x 3.0 m up to 6.0 m length

#### b-foam® Expanded Polystyrene (EPS):

- · Fire-Retardant (FR)
- Density: 12 kg/m³ (b-panel Neo®: 15 kg/m³ carbon-graphite EPS blend)

#### Wiremesh:

- Non galvanized Ø3mm vertical, Ø2.5mm horizontal, U-50, b-Lite®: Ø2mm
- · Connector: galvanized Ø3mm
- Spacing: 7.5 x 8 cm

#### Plaster thickness and concrete strength:

- Structural applications: K-225; 3 cm x 2
- Non-structural / partition applications K-150; 2 cm x 2

In our effort to continously improve our products, specifications may change from time to time.



(partition: b-lite\*), +145 kg/m² (structural: b-panel'/b-panel Neo')



sistant against break-ins, earthguake, and typhoon mum, b-coustic+\*: STC 45)

Rigid - monolithic structure (all

walls act as one unit), highly re-



Superior insulation against



Rapid and material-efficient



-Modular cutting list, eliminates waste at sites -Reduced A/C consumption up to 40%



Safe during fire - Passed fire test at National Building Material Testing Center: 120 minutes @1000°C for partition

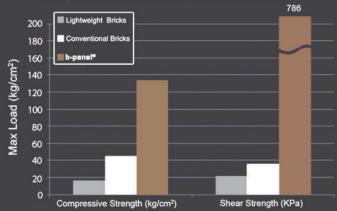


Enviromentally responsible: Reduced CO, emission from

- Mindful production process

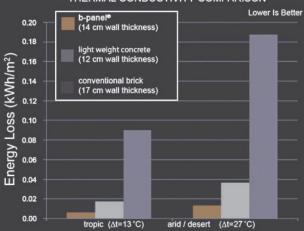


#### COMPRESSIVE AND SHEAR STRENGTH COMPARISON



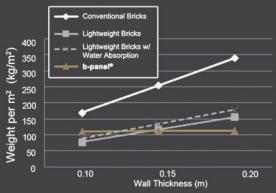
Sources: PT. Beton Elemenindo Putra R&D, ITB Civil Engineering Lab M. Z. Kabir and M. H. Nasab "Mechanical Properties of 3D Wall Panels Under Shear and Flexural Loading"

#### THERMAL CONDUCTIVITY COMPARISON

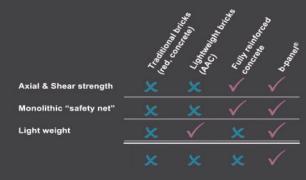


Sources: PT. Beton Elemenindo Putra R&D, AAC: A Lime-Based Technology (Ronald E. Barnett, P.E., 2005), plastics.org.nz

#### WEIGHT COMPARISON

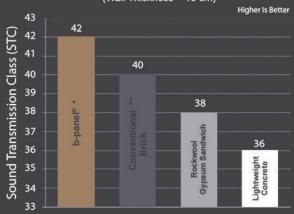


Sources: PT. Beton Elemenindo Putra R&D



LIGHTWEIGHT + STRENGTH = QUAKE-RESISTANCE

#### ACOUSTIC PERFORMANCE COMPARISON (Wall Thickness = 10 cm)



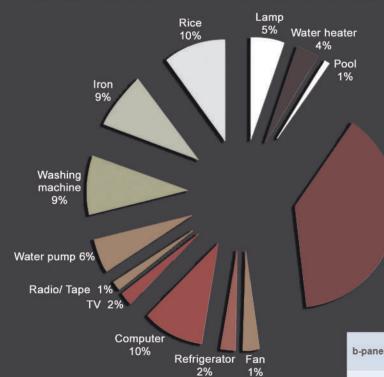
Sources: PT. Beton Elemenindo Putra R&D, ITB Physics Lab, MHE International (ASTM E90 Test), Diracdelta.co.uk Science & Engineering Encyclopedia

- \* 23 EPS Density
- \*\* With 12.5mm plaster on both sides

Industrialised Building System (b-panel®)	Conventional Construction
Less labour	Labour intensive
High effiency	Time consuming
Systematic/Well planned	High skill labour
Light weight	Heavy mobilisation
Minimal wastage	Materials shortage



# ELECTRICITY CONSUMPTION PROFILE IN A TYPICAL RESIDENTIAL HOUSE



AC 38%

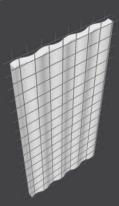
# AT LEAST 40% A/C ENERGY SAVINGS

**b-panel**® is an extensively insulated wall system.

All of this is made possible with its construction grade, Expanded Polystyrene (EPS), sandwiched with wire-mesh and concrete.

Giving it its foambox properties without compromising its stability.

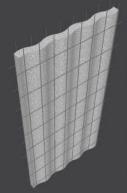
	Speed of Construction	Building Load Reduction	Construction Waste Reduction	Earthquake/ Typhoon Safety	Insulation/Energy Savings A/C	Acoustic Performance
b-panel <sup>e</sup>	000	000	000	0000	000	000
b-panel Neo®	000	000	000	0000	0000	000
b-coustic+®	000	000	000	0000	000	0000
b-lite®	000	000	000	000	000	000
Red Brick	8	8	8	8	8	99
Light Brick/AAC	99	000	8	99	99	8





# Versatile - for load bearing wall, partition wall with high hang load requirement, exterior wall

- Thermal insulation: Fire-Retarding (FR) b-foam<sup>®</sup> EPS 0.037W/M.K
- Maximum span up to 6 meters without additional columns
- · Hang load capacity: approx. 60 kg per point
- Approx. 145 kg/m<sup>2</sup> finished, for ANY wall thickness (10-30 cm)



# bopanel Neo

# For West or East-facing exterior wall, large temperature gradient wall

- b-panel® made with high-performance carbon-graphite EPS
- Thermal insulation: b-foam Neo<sup>®</sup> 50 EPS 0.035W/M.K
- Thermal performance equivalent to regular EPS of >2x density
- German technology, raw material imported from South Korea

# b-deck® Floor / Roof

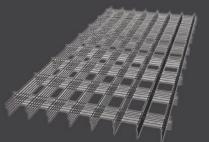
# Lightweight thermally-insulated deck Available thickness: 15 & 20 cm

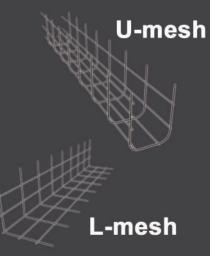
- Shield againts sunlight and ambient outside temperature
- Rapid installation without formwork
- Weight: 125-190 kg/m<sup>2</sup>
- Maximum span : 6 metres



# b-mesh®

- U-50 minimum tensile strength
- 6m max length, 1.2m wide also special size order.







## **BENEFITS**

- · Ultra-long life Does not decay nor degrade (chemically and dimensionally stable)
- · Superior safety factor Impossible to leak or sink
- · High buoyancy
- · Environmentally responsible production Recycle blend, CFC-free

# Technical specifications

### Construction grade Expanded Polystyrene (EPS)

- Optional: Fire-Retardant (FR) EPS
  Buoyancy: 500, 800 or 1000 kg/m2

#### **Grant-series Pontoon:**





# CERTIFICATION

BuildScape products have been tested and certified by Jabatan Bomba dan Penyelamat Malaysia and SIRIM Berhad Malaysia.

No. Fail: JBPM/IP/BKK:700-7/2/25-44 ( 5 ) No Siri: BB/WS/2297/2017

**LAMPIRAN A1** 

Jenis Bahan Binaan

EXPANDED POLYSTYRENE (EPS) SANDWICH CONCRETE

PANEL SYSTEM

2 JAM (NON-LOADBEARING)

Jenama & Spesifikasi

B-PANEL® - SINGLE PANEL SP-06

Total Thickness: 150mm

Nama & Alamat Pengeluar

PT BETON ELEMENINDO PUTRA (INDONESIA)

Tahap Rintangan Api

**INTEGRITY 120 MINIT & INSULATION 120 MINIT** 

No. Laporan ujian/Tarikh

SIRIM 2016FE0563 (15/12/2016)

Skim Persijilan Barangan

Had Kegunaan

DIBENARKAN SEBAGAI 'PARTY TIDAK HENDAKLAH MEMATUHI SPESIFIKASI UJIAN, UBBL 1984 SERTA SYARAT-SYARAT TAMBAHAN SEPERTI DI

LAMPIRAN A2 & A3.



Tempoh sah perakuan: 02/03/2017 hingga 01/03/2018

No. Fail: JBPM/IP/BKK:700-7/2/25-44 ( 3

# SIJIL PEPASANGAN KESELAMATAN KEBAKARAN

# Jabatan Bomba dan Penyelamat Malaysia dengan ini memperakukan

Fire and Rescue Department of Malaysia hereby certify



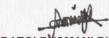
Berdasarkan Piawaian Complying with

BS 476:PART 22:1987

Syarikat Berdaftar Registered company

BUILDSCAPE SDN BHD 52-2 Jalan Awan Hijau, Taman OUG, 58200 Kuala Lumpur.

Tempoh sah perakuan: 02/03/2017 hingga 01/03/2018



(DATO' RUSMANI BIN MUHAMAD)

Penolong Ketua Pengarah Bahagian Keselamatan Kebakaran, b.p. Ketua Pengarah Jabatan Bomba dan Penyelamat Malaysia.

Tarikh: 9 Mac 2017

Sila patuhi sepenuhnya syarat-syarat dan had kegunaan seperti dalam Lampiran A1









#### SIRIM QAS International Sdn. Bhd.

No. 2, Persiaran Dato' Menteri, P.O. Box 7035; Seksyen 2, 40700 Shah Alam,



Selanger Darul Ehsan, MALAYSIA. Tel: 03-55446465 Fax: 03-55446454 (Company No: 410334-X)

http://www.sirim.my

#### **TEST REPORT**

REPORT NO.: 2016FE0563

PAGE: 1 OF 23

This Test Report refers only to samples submitted by the applicant to SIRIM QAS International Sdn. Bhd. and tested by SIRIM QAS International Sdn. Bhd. This Test Report shall not be reproduced, except in full and shall not be used for any purpose by any by means or forms (including but not limited to advertising purposes) without written approval from Managing Director of SIRIM QAS international Son. Bhd. Please refer overleaf of Page 1 for conditions relating to the use of Test Report.

Applicant BUILDSCAPE SDN. BHD.

52-2, Jalan Awan Hijau.

Taman OUG,

58200, Kuala Lumpur.

(Attn.: Mr. Lionel Lim)

Manufacturer PT BETON ELEMENINDO PUTRA. Jalan Raya Batujajar KM 5 no 8.

Cangkaroh, Kabupaten Bandung Barat,

40561 Indonesia.

Product Expanded Polystyrene (EPS) Sandwich Concrete Panel System

Reference Standard/

BS 476: Part 22: 1987 Method of Test

Methods for determination of the fire resistance of non-load bearing elements of

construction. Clause 5 - Determination of fire resistance of partition

Hose Stream test utilizing the test methodology given in ASTM Standard E2226-10:

Standard Practice for Application of Hose Stream.

Description of sample A single layer of non-load bearing Expanded polystyrene (EPS) sandwich concrete

panel system which were erected and held to the test frame on the 05.09.2016. Full description of the test specimen and construction of the Expanded polystyrene

(EPS) sandwich concrete panel system are detailed in Page 3 of this report.

Brand :b-panel®

Type: Single Panel SP-06

Nominal Size: 3000 mm (h) x 3000 mm(w) x 150 mm (t)

Test result Fire Resistance Test : Integrity : 120 minutes

Insulation : 120 minutes

Hose Stream Test : The Expanded polystyrene (EPS) sandwich

concrete panel system meets the requirements.

Date of test : 10.10.2016

Date received : 06.05.62016

Job No./ Ref No. J20161440307/SQAS/FPS/15/1-3

15 DEC 2016 Issued date

Approved Signatories

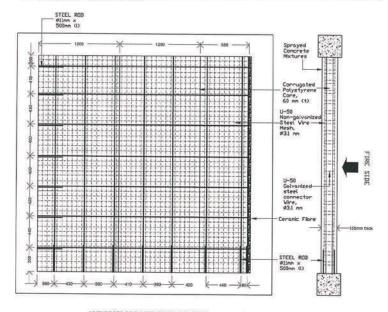
SHARIFAH NUR BADARIAH SYED ABU BAKAR Testing Executive

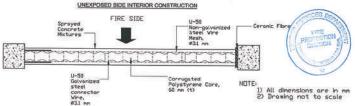
ROHAYA IBRAHIM HEAD Fire Protection Section

Testing Services Department SIRIM QAS International Sdn. Bhd. REPORT NO.: 2016FE0563

PAGE: 16 OF 23

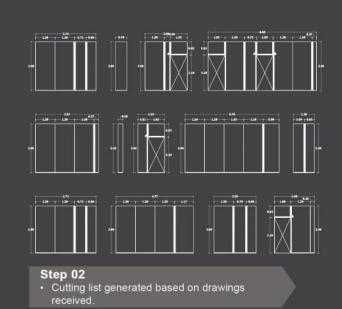
This Test Report refers only to samples submitted by the applicant to SIRIM QAS international Sdn. Bhd. and tested by SiRIM QAS International Sdn. Bhd. This Test Report shall not be reproduced, except in full and shall not be used for any purpose by any by means or forms (including but not imitted to advertising purposes) without written approval from Managing Director of SIRIM QAS International Sdn. Bhd. Please refer overleaf of Page 1 for conditions relating to the use of Test Report.

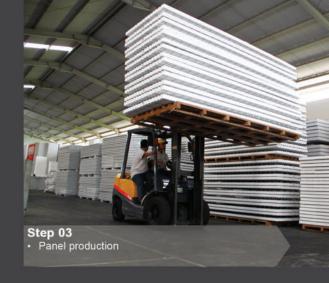




igure 4: GENERAL CONSTRUCTION OF THE EXPANDED POLYSTYRENE (EPS) SANDWICH CONCRETE PANEL SYSTEM

















- Before the panels are installed, the rebar is installed onto foundation beams, floor slabs,
- · The rebar are installed in an alternating "zig-zag" pattern.
- For steel structures, the rebars are welded onto the steel beams and columns



#### Step 02 Panel installation

- Panels are prepared according to plan drawingsAlthough panels are sized to modular typical sizing, panels may be trimmed to be adapted to site conditions.
- Tie wires are used to tie the panel onto the rebar



#### Step 03 Support braces & M/E Installation

 Panels to be installed with supports and alignments performed so to ensure they are installed straight and each plane is perper



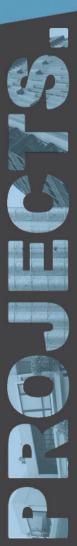
#### Step 04 Preparation for Electrical & Plumbing

 M&E works are able to be seamlessly incorporated with the panels without the need for excessive hacking through any hard surfaces before the concrete layer is applied



## Step 05 Shortcrete & Plastering

- · Using a shortcrete machine, apply first layer of concrete on both sides of the panel
- Apply guidance mode to ensure consistent thickness of the second (final) layer of plaster.
- Afterwards, smoothen the surface using screed



NO.	PROJECT	AGENCY	COMPANY
1	Repair and upgrade of facilities for Projek Perumahan Rakyat (PPR) Malaysia Permai, Mukim Sg. Besi, Kuala Lumpur	Kementerian Perumahan dan Kerajaan Tempatan Cawangan Perlaksanaan dan Penyelenggaran Projek	Nurwali Sepadu Sdn. Bhd
2	Provide office cleaning services for Pejabat Kastam Kelana Jaya.	Kastam DiRaja Malaysia Wilayah Persekutuan Kuala Lumpur	Nurwali Sepadu Sdn. Bhd
3	Provide, delivery and installation for 4 headquarters of Perbadanan Pengurusan Sisa Pepejal dan Pembersihan Awam.	Perbadanan Pengurusan Sisa Pepejal dan Pembersihan Awam	Nurwali Sepadu Sdn. Bhd
4	Interior designing, renovation works and the supplying of furniture for the headquarters of Perbadanan Pengurusan Sisa Pepejal Negara at UOA Pantai, Bangsar, Kuala Lumpur	Kementerian Perumahan & Kerajaan Tempatan	Nurwali Sepadu Sdn. Bhd
5	Renovation works for 8 housing units from level 1 to level 4 which is converted into the office for Pencegah Kuala Lumpur at the old housing Kastam Wilayah	Kastam DiRaja Malaysia Wilayah Persekutan Kuala Lumpur	Nurwali Sepadu Sdn. Bhd
6	Upgrading of the existing drainage system and other works regarding the surrounding of Kg. Sri Langas, Kg. Sri Aman, Kg Sri Puching and Kg. Bersatu, Puchong.	Kementerian Perumahan & Kerajaan Tempatan	Nurwali Sepadu Sdn. Bhd









# COMPLETED

RESIDENTIAL



















# **COMMERCIAL / INSTITUTION**

# **COMPLETED**

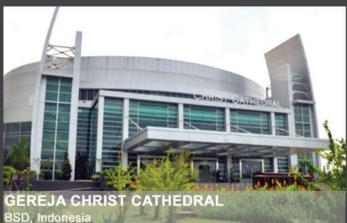














# COMPLETED







SPORT JABER ARENASITTING AREA TRIBUNE Bandung, Indonesia







URUNGAN BUDI ASIH
Indonesia



# b - foam<sup>e</sup>

**GEOFOAM** 

# **COMPLETED**













Sommerset Aprtments, Jakarta Selatan, Indonesia



# COMPLETED

















**ULTRALIGHT FACADE** 

# **COMPLETED**









Bintaro, Jakarta, Indonesia





**CURRENT** 



# COMPLETED









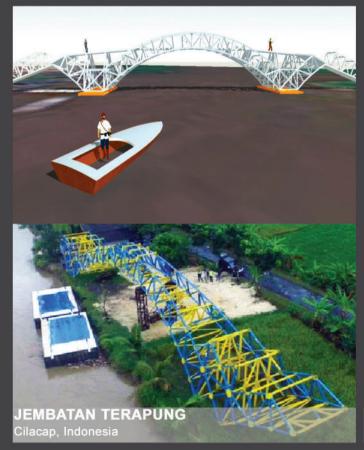






FLOATING STRUCTURE

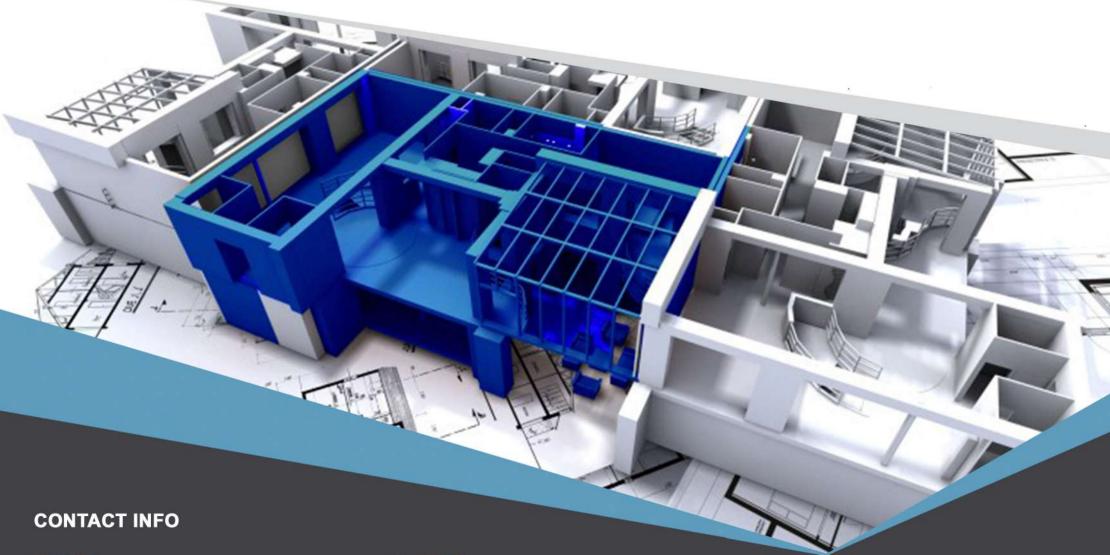
# **CURRENT**





PERPUSTAKAAN TERAPUNG TAMBAK LOROK Semarang, Indonesia





# **OFFICE**

52-2, Jalan Awan Hijau, Taman OUG, 58200 Kuala Lumpur, Malaysia.

T +603 7972 6117 F +603 7972 6118

E info@buildscape.my

**FACTORY** 

Jl. Raya Batujajar Km. 5, No. 8, Cangkorah, Kab. Bandung 40561, Indonesia.

T +62 (22) 686 7077 F +62 (22) 686 7076 E info@b-panel.com

www.buildscape.my