

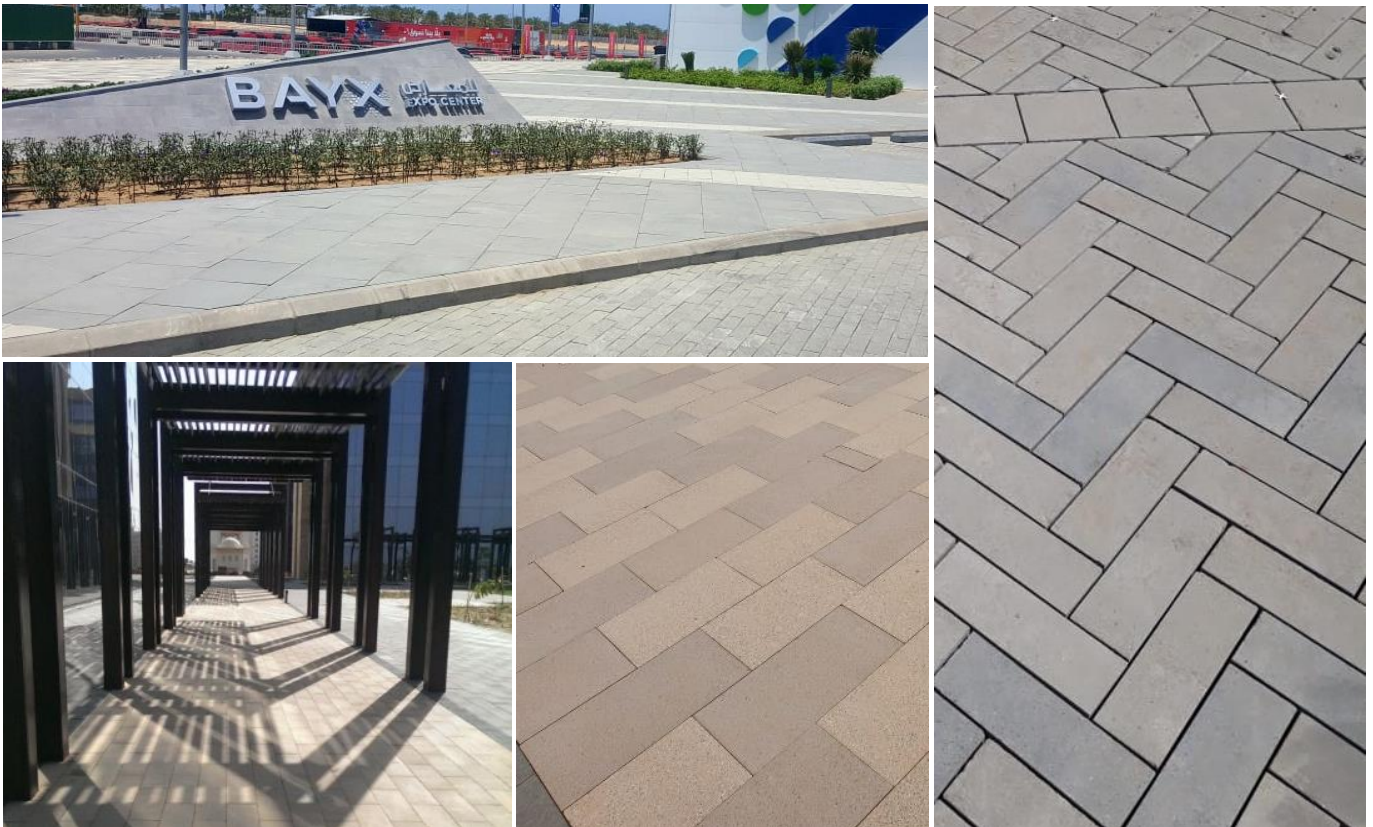
## Technical & Material Data Sheet for Paving Flags

All AIM Grana-Lux paving flags are manufactured in our factory located in Khulais, 5km from KAEC Haramain High Speed Railway Station, perfectly placing us to deliver across the Western Region and beyond. AIM operate their own vehicles not only from raw material acquisition but delivering to sites, to ensure reduction in Scope 3 emissions for our customers and enable us to guarantee the quality our customers and the subsequent users deserve.

AIM regimentally follow a QA/QC Policy designed to ensure that our products are of the highest quality, matching and often exceeding specifications. This means all raw materials procured are tested and compared to original samples obtained from previous deliveries. Raw material suppliers are audited on a yearly basis and any new supplier is only added once we are satisfied all government certifications/licenses, facilities, processes and of course raw material are vetted.

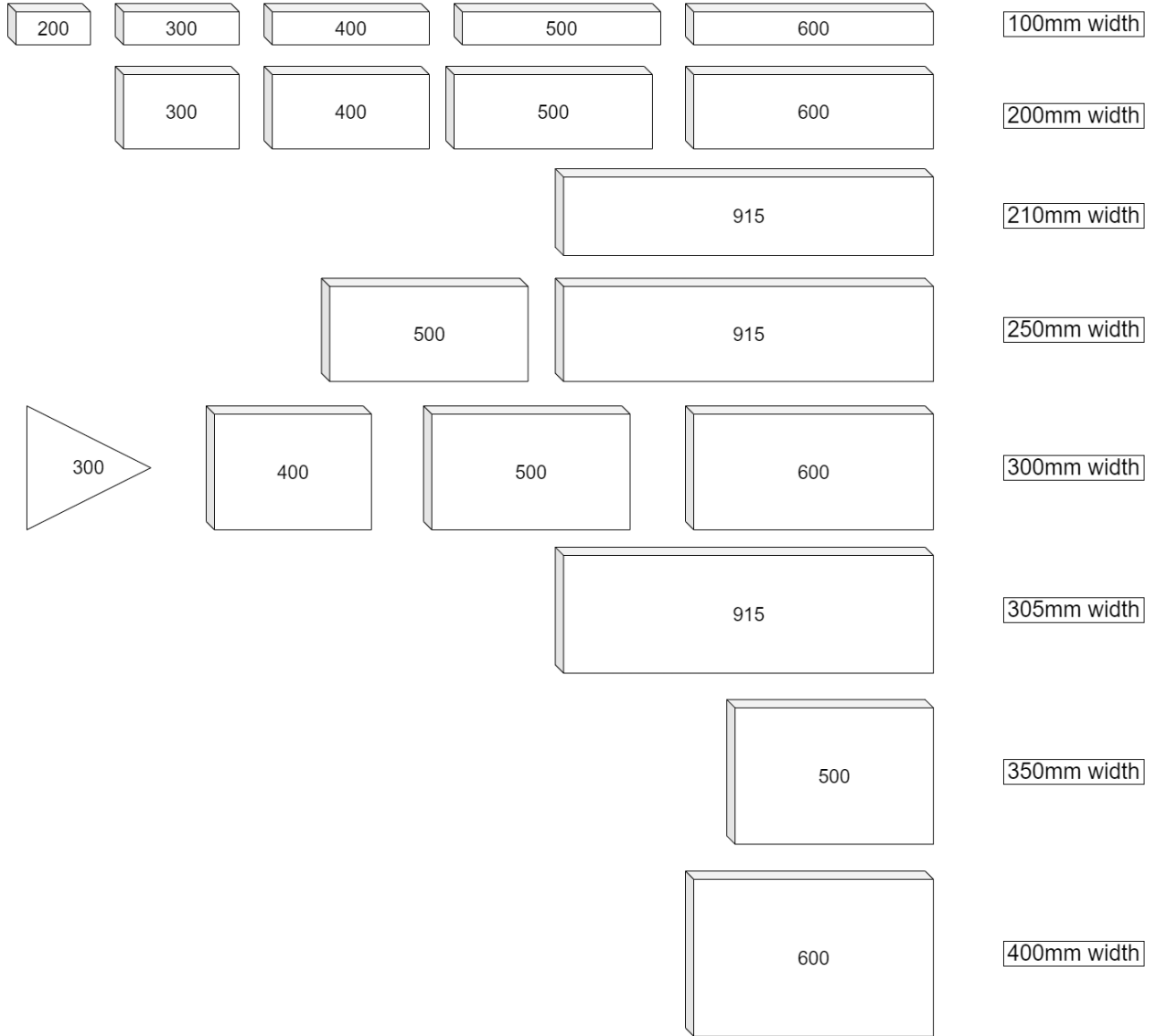
All Grana-Lux paving flags are produced using a hydraulic pressing machine. The hydraulic press process is different to our competitors' products in that, the paving flag is one singular mix from top to bottom, almost entirely eliminating any honeycombing, which reduces the water absorption and increases the strength, as our test results have consistently shown. AIM do not cut corners and pride ourselves on our product.

For more information about the hydraulic press production process, please send a request to [info@aimblock.com](mailto:info@aimblock.com) or alternatively schedule a visit to the factory by emailing [ali@aimblock.com](mailto:ali@aimblock.com).

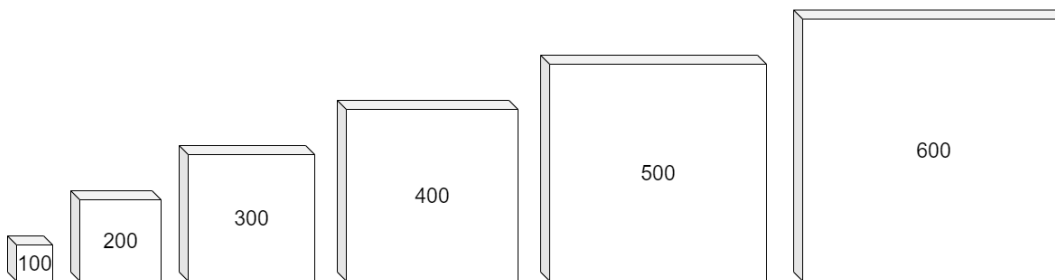


## Technical Drawing and Dimensions

### Rectangular



### Square



## Mix Design

Item	Percentage
Aggregate 1:	40.0 %
Aggregate 2:	32.0 %
Dune Sand	12.0 %
Sulphate Resistant Cement	16.0 %
Water	22.5 %

## Technical Specifications

AIM follow and exceed BS-EN 1338 & 1339 for Paving Blocks and Flags as per below specifications.

<b>Water Absorption</b>	≤ 5%
<b>Flexural Strength</b>	63.5
<b>Impact Value</b>	7.80 kgm
<b>Abrasion Factor</b>	3.0 mm
<b>Strength</b>	≥ 49 Mpa
<b>Dimension: Width/Length</b>	+/- 3mm
<b>Dimension: Thickness</b>	+/- 3mm

# Test Results

## MTL

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Construction Materials Laboratory and Engineering Services

### REPORT ON TESTING FLEXURAL STRENGTH

CLIENT	AIM INDUSTRIES	WORK ORDER NO.	5772
PROJECT	JEDDAH ECONOMIC CITY	REPORT NO.	5772-06
LOCATION	JEDDAH	REPORT DATE	12-05-2020

TEST METHOD	ASTM C293	DATE RECEIVED	07-05-2020
LAB NO.	STN 1-3	SAMPLED BY	CLIENT

SAMPLE DESCRIPTION	MAIN TILE SIZE 50 x 30 x 80	DATE TESTED	07-05-2020
		AIR TEMPERATURE (°C)	23
BRAND	AIM INDUSTRIES	RELATIVE HUMIDITY (%)	52
SAMPLE CONDITION.	AIM INDUSTRIES	TESTING MACHINE	WLTER 50 KN

### SPECIMEN MEASUREMENTS

LAB NO.	WIDTH (mm) [W]	SPAN LENGTH (mm) [L]	DEPTH (mm) [D]
STN 1	101	330	82
STN 2	101	330	83
STN 3	101	330	83

### FLEXURAL STRENGTH TESTING RESULTS (ASTM C293)

LAB NO.	LOAD (kN) [P]	FLEXURAL STRENGTH (MPa)
STN 1	20.47	7.5
STN 2	19.86	7.1
STN 3	21.51	7.7
AVERAGE		7.4

FLEXURAL STRENGTH	7.4 MPa
	75.4 kg/cm <sup>2</sup>
PROJECT REQUIREMENT (MIN.)	5.0 MPa

CALCULATION: FLEXURAL STRENGTH (TWO POINT LOAD) =  $3PL/4BD^2$

REMARKS	SAMPLES CONFORM TO PROJECT REQUIREMENT
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TESTED BY SIGNATURE	CHECKED BY SIGNATURE	VERIFIED BY SIGNATURE
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- SAMPLE PREPARED BY MTL  
 RESULTS RELATE ONLY TO THE SAMPLE AS RECEIVED

MTL MANAGEMENT IS NOT RESPONSIBLE OF CUSTOMER SAMPLE 15 DAYS AFTER THE TEST DATE  
THE TEST REPORT SHALL NOT BE REPRODUCED WITHOUT APPROVAL FROM THE MTL MANAGEMENT



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## REPORT ON TESTING BULK DENSITY AND ABSORPTION

CLIENT	AIM INDUSTRIES	WORK ORDER NO.	5772
PROJECT	JEDDAH ECONOMIC CITY	REPORT NO.	5772-01
LOCATION	JEDDAH	REPORT DATE	12-05-2020
TEST METHOD	ASTM C97	DATE RECEIVED	07-05-2020
LAB NO.	STN 1-3	SAMPLED BY	CLIENT
SAMPLE DESCRIPTION	MAIN TILE SIZE 50 x 30 x 60	AIR TEMPERATURE °C	21.4
SOURCE	AIM INDUSTRIES	RELATIVE HUMIDITY (%)	51
SUPPLIER	AIM INDUSTRIES	DATE TESTED	12-05-2020




### TEST DETAILS AND RESULTS

TEST PARAMETERS / TEST NO.			1	2	3	AVERAGE
A	MASS OF OVEN DRY SAMPLE IN AIR	(g)	265.3	259.8	271.3	-
B	MASS OF SAMPLE IN SATURATED SURFACE DRY CONDITION AFTER 48 HRS SUBMERSION	(g)	272.4	266.6	278.6	-
C	MASS OF SATURATE SAMPLE IN WATER	(g)	167.9	163.8	170.1	-
1	ABSORPTION	$[B-A]/[A] \times 100$ (%)	2.68	2.62	2.69	2.66

TEST RESULTS	
ABSORPTION (%)	2.66

REMARKS	SAMPLE CONORMS TO PROJECT REQUIREMNETS
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TESTED BY		CHECKED BY		RIFIED BY	
SIGNATURE		SIGNATURE		GNATURE	

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 RESULTS RELATE ONLY TO THE SAMPLE AS RECEIVED

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مصنع الموقع - طريق مكة - المدينة قديم. خليص - المملكة العربية السعودية  
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Cr. No 4604006292 VAT No 300683668700003  
Telephone: +966 12 215 8558 Email: info@aimblock.com  
Website: www.aimblock.com



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REPORT ON TESTING COMPRESSIVE STRENGTH

CLIENT	AIM INDUSTRIES	WORK ORDER NO.	5772
PROJECT	JEDDAH ECONOMIC CITY	REPORT NO.	5772-03
LOCATION	JEDDAH	REPORT DATE	12-05-2020

TEST METHOD	ASTM C170	DATE RECEIVED	07-05-2020
LAB NO.	STN 1-3	SAMPLED BY	CLIENT

SAMPLE DESCRIPTION	MAIN TILE SIZE 50 x 30 x 60	AIR TEMPERATURE (°C)	24
SOURCE	AIM INDUSTRIES	RELATIVE HUMIDITY (%)	51
SAMPLE REF	AIM INDUSTRIES	TESTING MACHINE	FOURNY 3000 KN

SPECIMEN MEASUREMENTS

LAB NO.	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	CROSS-SECTIONAL AREA (mm <sup>2</sup> )
STN-1	50	50	50	2500
STN-2	50	50	50	2500
STN-3	50	50	50	2500

COMPRESSIVE STRENGTH TESTING RESULTS (ASTM C170)

LAB NO.	DATE TESTED	LOAD (kN)	COMPRESSIVE STRENGTH (MPa)	AVERAGE (MPa)
STN-1	12-05-2020	142.50	57.0	56.4
STN-2	12-05-2020	139.80	55.9	
STN-3	12-05-2020	140.60	56.2	

COMPRESSIVE STRENGTH	56.4	MPa
	575.1	kg/cm <sup>2</sup>
PROJECT REQUIREMENT (MINIMUM)	52.0	MPa

REMARKS: SAMPLES CONFORMS TO PROJECT REQUIREMENTS



TESTED BY SIGNATURE		CHECKED BY SIGNATURE		VERIFIED BY SIGNATURE	
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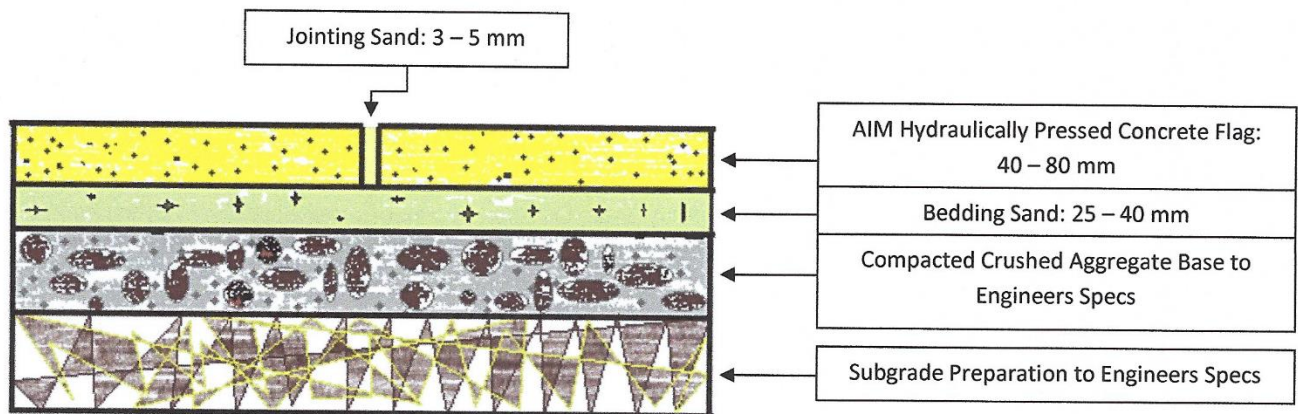
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## Site & Customer Requirements

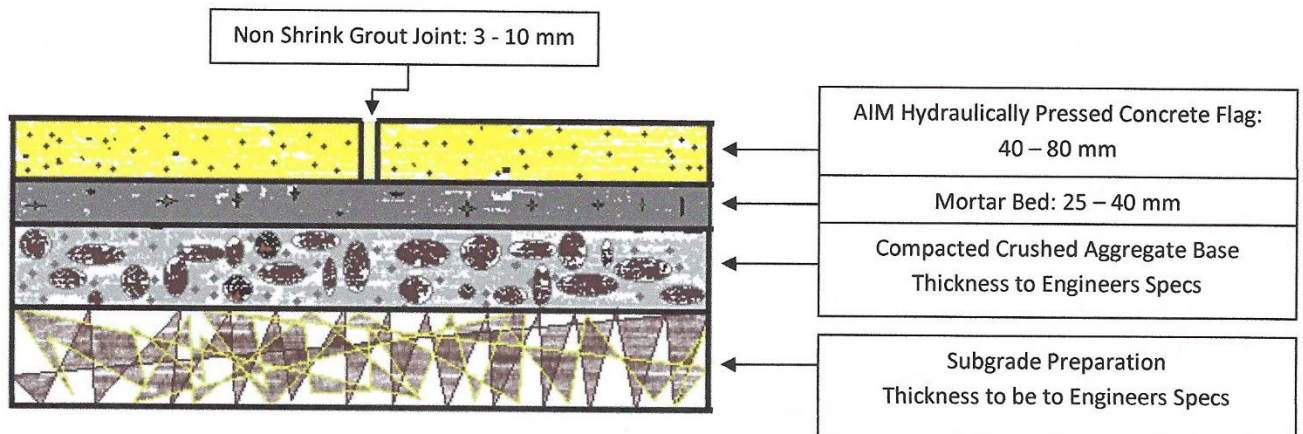
- Clear lifting zone for offloading materials on compacted level hardcore.
- Discharging of trucks shall be done with suitable forklift on site.
- Suitable and qualified civil engineer/Inspector to inspect product on delivery and assess likeness to sample. Any and all damage and queries to be informed to AIM on delivery completion.
- Products to only be moved with use of suitable forklift to avoid chipping and damage to the face of product thereafter.
- Product to be stored above ground to avoid contamination with sand and water.
- To be installed in accordance to the below diagrams provided to ensure no damage occurs after installation.

# AIM Installation Guidelines

## A / Pedestrian Paving Guideline

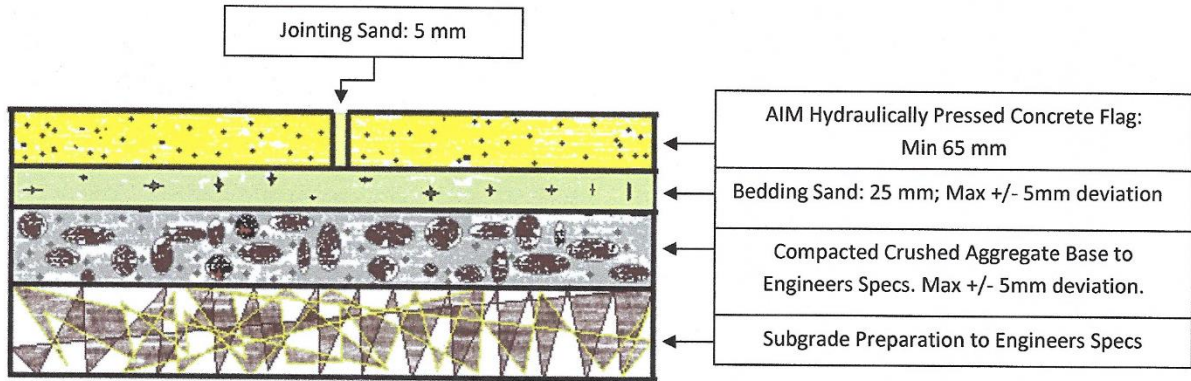


## B / Concrete Paving Guideline

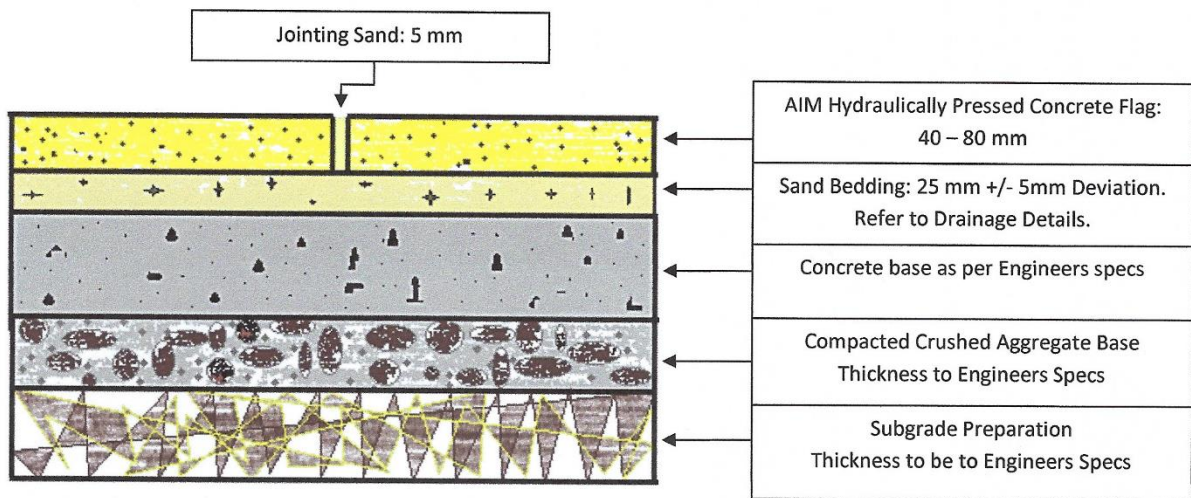




### C . Vehicular Paving / Sand Bedding Guideline



### B / Concrete Paving Guideline



*Please note the above drawings are guidelines only; please refer to Engineers Specifications.*