



**SUSTAINABLE
DEVELOPMENT**

GOALS



INTERLOCKING CONCRETE PAVERS

Lifestyle Sustainable Development
Eco-friendly Pavement Solutions Provider



SUNWAY®

INTRODUCTION

Sunway Paving Solutions Sdn Bhd is a wholly owned subsidiary of Sunway Berhad. As a leading company in the manufacturing of innovative interlocking concrete pavers and compressed concrete paving slab (Eurotiles), we command more than 60% of the market shares across Malaysia & Singapore.

As part of Sunway Group, we work towards realising the Group's vision of becoming Asia's model corporation in Sustainable Development and remain committed to the United Nations Sustainable Development Goals. We minimise environmental pollution by maximising the usage of recycled material in our products and helps to conserve natural resources. In addition, the High Solar Reflectiveness of our products in light colours helps reduce "island heat" effect.

Interlocking concrete pavers and compressed concrete paving slab are highly durable pavement material and require minimal maintenance. It is certainly the

most economical choice to enhance the landscape aesthetically.

At Sunway, we reassure the health & wellbeing of people and we take road safety seriously. All our products are manufactured in accordance with skid resistance index score of above 65. With excellent grip and traction on pathways, we can ensure the safety of users at all times regardless of the weather.

Sunway Paving Solutions Sdn. Bhd. is not just any ordinary paving solutions company, we pave towards a greener and safer nation underscored by our core values of integrity, humility and excellence.

Benefits of SUNWAY INTERLOCKING CONCRETE PAVERS



Aesthetic & Versatile Colour Coding Possibilities

Variety of colours leads to interesting designs



Absolute Durability

Minimal maintenance, hard wearing surface & high skid resistance



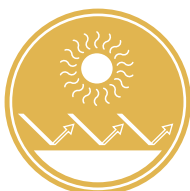
Ease of Laying & Immediate Use

Inaccessible areas with slopes and gradients can be paved easily without using heavy equipment. Can be opened to traffic immediately upon completion



Algae Resistance

Able to reduce the formation of algae of the pavers surface



High Solar Reflectance

Light-coloured pavers absorb less heat, results in cooler surface and reduces heat island effect



Green Product

Made from recycled materials, can be reused and recycled.



CLASSIC

Johor Bahru



Anchorlok

Size : 223mm x 111mm
Area Coverage : 26.3 pieces/m²
Thickness : 80mm
Approx Weight : 6.35kg



Desert Fern

Size : 210mm x 136mm
Area Coverage : 35 pieces/m²
Thickness : 60 / Z60 / 80mm
Approx Weight : 3.65 / 4.70kg



Desert Lily

Size : 210mm x 220mm
Area Coverage : 39 pieces/m²
Thickness : 60 / Z60 / 80mm
Approx Weight : 3.05 / 4.10kg



Flexipave

Size : 198mm x 98mm
Area Coverage : 49.5 pieces/m²
Thickness : 60 / Z60 / 80 / 100mm
Approx Weight : 2.45 / 3.40 / 4.35kg



Trafika

Size : 225mm x 197mm
Area Coverage : 29 pieces/m²
Thickness : 80 / 100mm
Approx Weight : 5.80 / 7.25kg



Twinpave

Size : 209mm x 104mm
Area Coverage : 44.1 pieces/m²
Thickness : 60mm
Approx Weight : 2.45kg



Uni Decor

Size : 228mm x 138mm
Area Coverage : 37.8 pieces/m²
Thickness : 60 / Z60mm
Approx Weight : 3.35kg



Uni Espave

Size : 220mm x 190mm
Area Coverage : 34.7 pieces/m²
Thickness : 60 / Z60mm
Approx Weight : 3.50kg



Unipave

Size : 223mm x 111mm
Area Coverage : 39.5 pieces/m²
Thickness : 60 / Z60 / 80 / 100mm
Approx Weight : 3.10 / 4.20 / 5.45kg

GRASSPAVE



Prime Grasspave

Size : 200mm x 200mm
 Area Coverage : 25 pieces/m²
 Thickness : 80mm
 Approx Weight : 5.24kg



Desert Lily Grasspave

Size : 313mm x 313mm
 Area Coverage : 10 pieces/m²
 Thickness : 80mm
 Approx Weight : 12.00kg



Uni-grasspave

Size : 336mm x 223mm
 Area Coverage : 13.2 pieces/m²
 Thickness : 80mm
 Approx Weight : 8.80kg



KT Grasspave

Size : 346mm x 346mm
 Area Coverage : 9 pieces/m²
 Thickness : 80mm
 Approx Weight : 12.87kg



Super Uni-grasspave

Size : 453mm x 453mm
 Area Coverage : 4.83 pieces/m²
 Thickness : 100mm
 Approx Weight : 29.00kg



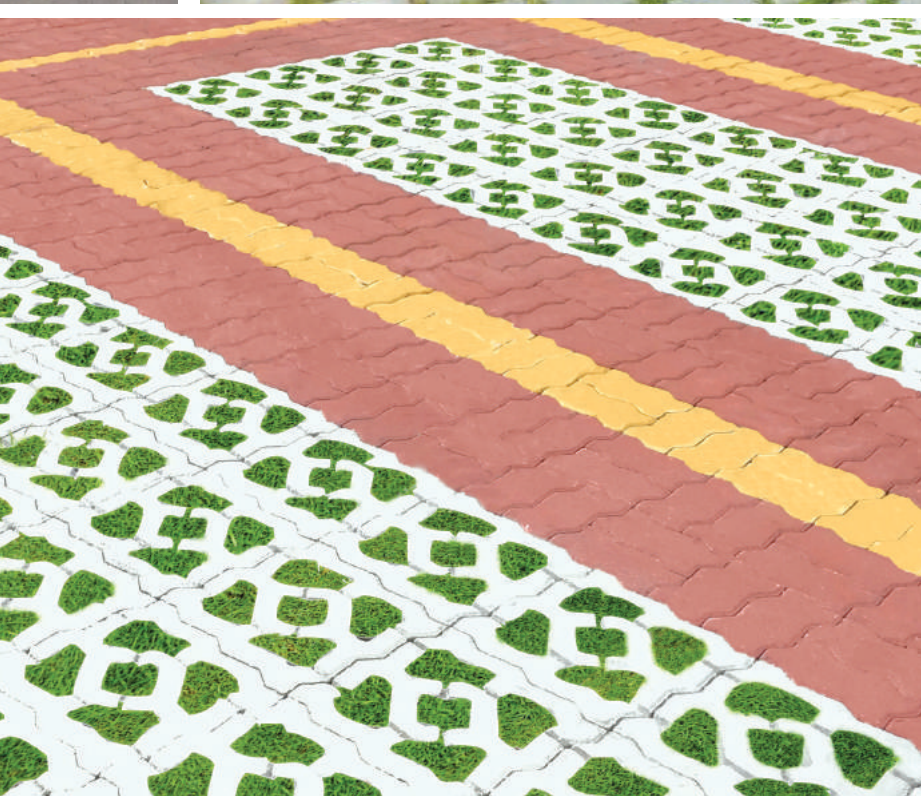
Kuala Terengganu



Kuala Terengganu



Alor Setar



Johor Bahru



Seberang Perai



Kuala Lumpur

PLUS SIZE



Selangor



Seberang Perai



Flexipave Plus

Size : 150mm x 300mm
Area Coverage : 22.22 pieces/m²
Thickness : 80mm
Approx Weight : 7.8kg



i Pavers

Size : 1000mm x 1000mm
Area Coverage : 1 piece/m²
Thickness : 80 / 100mm
Approx Weight : 80.0 / 225.0kg



Sungai Petani



Petaling Jaya



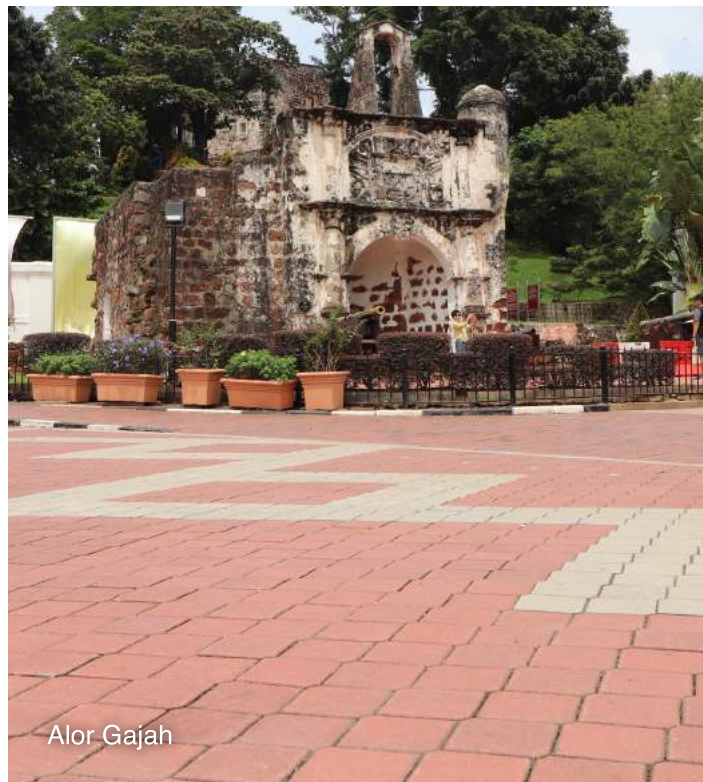
Skudai

GEOPAVE



Geopave

Size : 200mm x 200mm
 Area Coverage : 25 pieces/m²
 Thickness : 60 / 80mm
 Approx Weight : 4.90 / 6.50kg

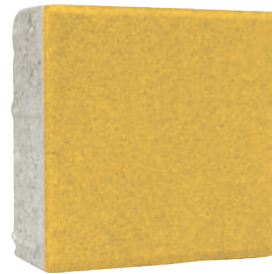


Alor Gajah



Kuantan

PRIME PAVERS



Size : 200mm x 200mm
 Area Coverage : 25 pieces/m²
 Thickness : 60 / 80mm
 Approx Weight : 6.00 / 6.80kg



Kuala Langat



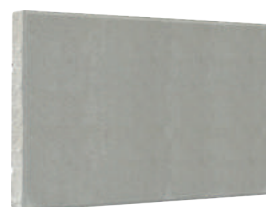
Size : 200mm x 400mm
 Area Coverage : 12.5 pieces/m²
 Thickness : 60mm
 Approx Weight : 10.42kg



Size : 400mm x 400mm
 Area Coverage : 6.25 pieces/m²
 Thickness : 60mm
 Approx Weight : 6.25kg



Kuala Langat



Size : 400mm x 600mm
 Area Coverage : 60 pieces/m²
 Thickness : 33mm
 Approx Weight : 4.16kg



Size : 600mm x 600mm
 Area Coverage : 60 pieces/m²
 Thickness : 49mm
 Approx Weight : 2.78kg



MULTIPLE SIZE

Johor Bahru



Kuala Lumpur



M I

Size (mm)	Thickness (mm)	Approx Weight (kg/pcs)	Area Coverage (pcs/m2)
201 x 201	80	7.0	4 sets
201 x 268		9.6	
201 x 335		11.7	
268 x 335		15.5	

* Only sold in full set of 4 pcs.



M II

Size (mm)	Thickness (mm)	Approx Weight (kg/pcs)	Area Coverage (pcs/m2)
120 x 160	60	2.35	12 sets
160 x 160		3.15	
160 x 240		4.60	

* Only sold in full set of 3 pcs.



Kuala Lumpur



Johor Bahru



Hulu Selangor



Kuala Langat

COBBLEPAVE



Cobblepave

Size : 100mm x 100mm
 Area Coverage : - pieces/m²
 Thickness : 100mm
 Approx Weight : 2.2kg



Cobblepave 2.0

Size : 125mm x 125mm
 Area Coverage : - pieces/m²
 Thickness : 80mm
 Approx Weight : 2.4kg



WOOD PAVERS



Size : 200mm x 600mm
Area Coverage : 8.33 pieces/m²
Thickness : 60mm
Approx Weight : 10.42kg

Setia



Setia



LED PAVERS

Kuala Langat

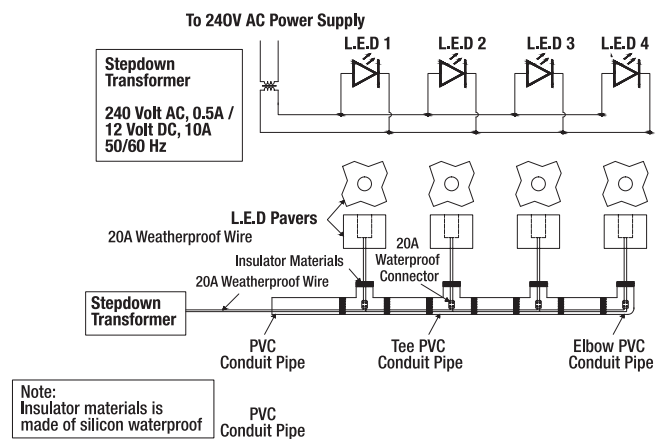


Size : 111mm x 111mm
Area Coverage : 78.9 pieces/m²
Thickness : 80mm
Approx Weight : 2.0kg

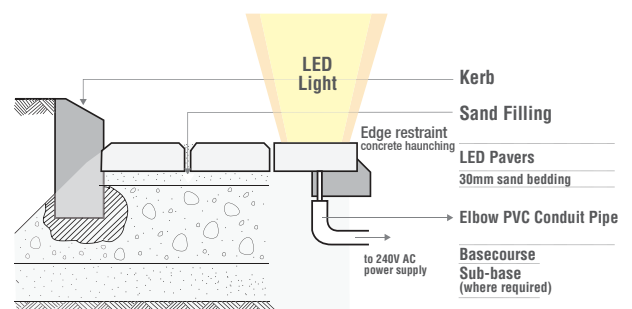


Size : 100mm x 200mm
Area Coverage : 49.5 pieces/m²
Thickness : 80mm
Approx Weight : 3.4kg

L.E.D Pavers Installation



Typical Pavement Cross-section



NEUPAVE



**HONOUR
AWARD**

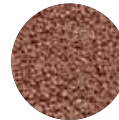
Supplier & Manufacturer Category
Green Product Awards



THICKNESS

60MM - 30MPa
80MM - 45MPa

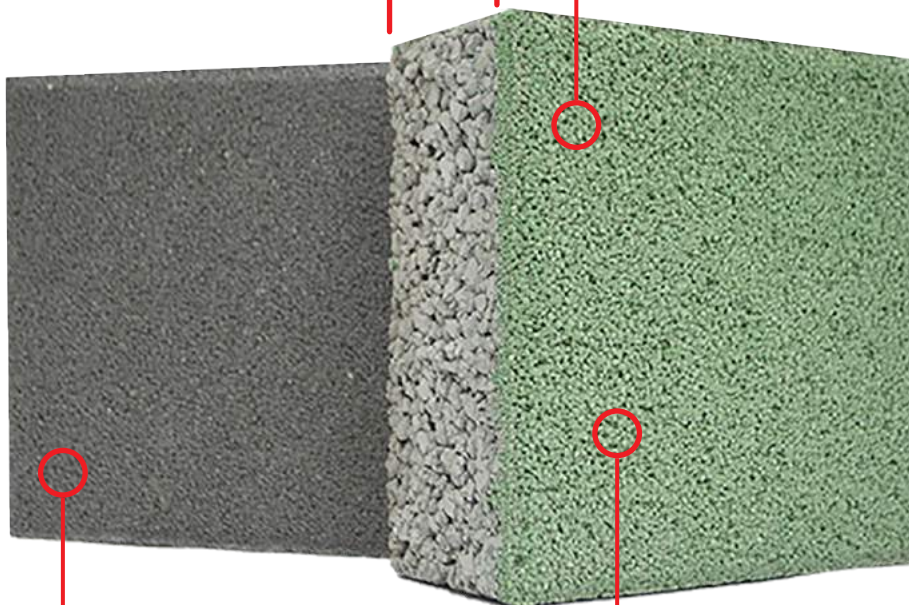
FINISHES



Fine Finished
(10-12% Porosity)



Rough Finished
(15-17% Porosity)



COLOURS

Premium



Standard



PROFILES



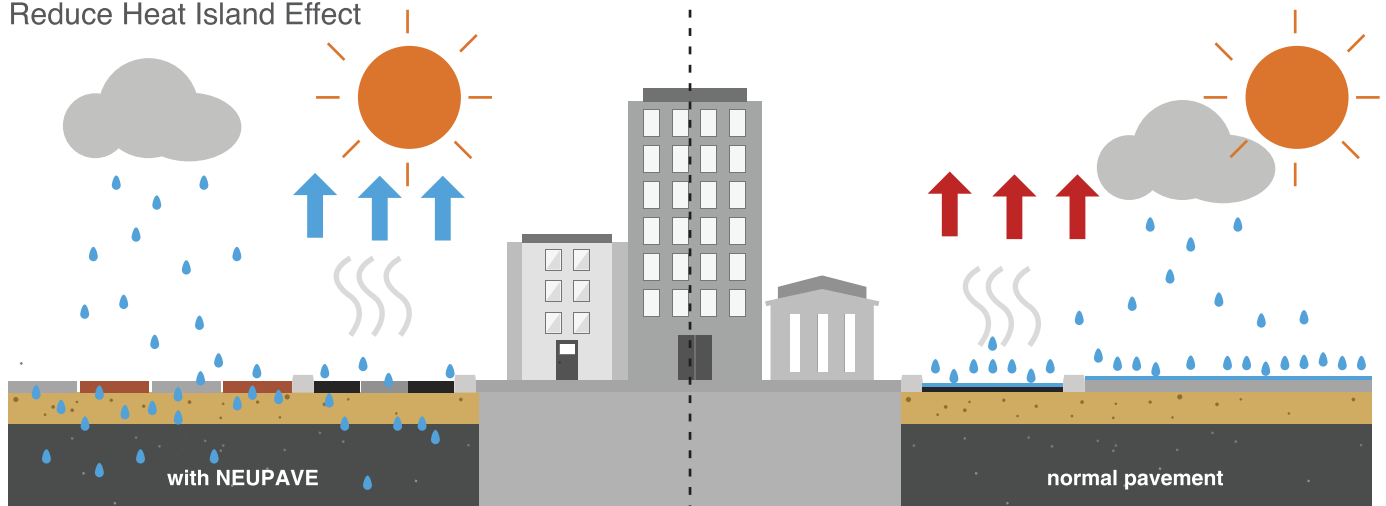
As the first in Malaysia to manufacture this new paving technology, Neupave is a paving alternative to more traditional types of hardscape flooring materials, where water is now allowed to permeate through the surface to underlying soil.

Normal concrete pavements do not allow much water to infiltrate particularly if they are mortared in place. The flowing water would normally hit the surface and then flow down to the nearest drainage channel, becoming storm water runoff. Neupave differs vastly from the

above as its hard surfacing allows water to percolate to an underlying reservoir base. Permeable pavement can be used instead of standard concrete for surfacing sidewalks, driveways, parking areas and many types of pavement surfaces. As the usual concrete is considered to be impermeable, water that falls usually stays on the surface and cannot flow through the surface to the soils below, but rather runs to the lowest points to be drained away.

SYSTEM A FULL EXFILTRATION

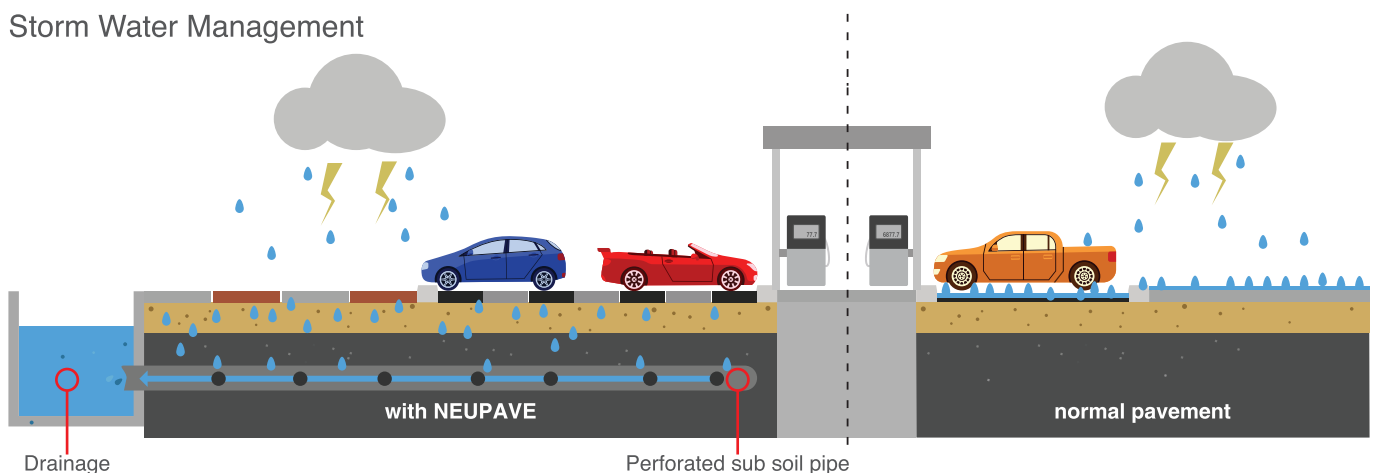
Reduce Heat Island Effect



This full exfiltration system allows water to fully infiltrate into the ground directly through series of permeable materials and also the sub-grade with good water permeability. The moisture within the ground evaporates through Neupave pores and draws the heat out cooling the surrounding. This system works well in area with low water table and at residential area.

SYSTEM B PARTIAL EXFILTRATION

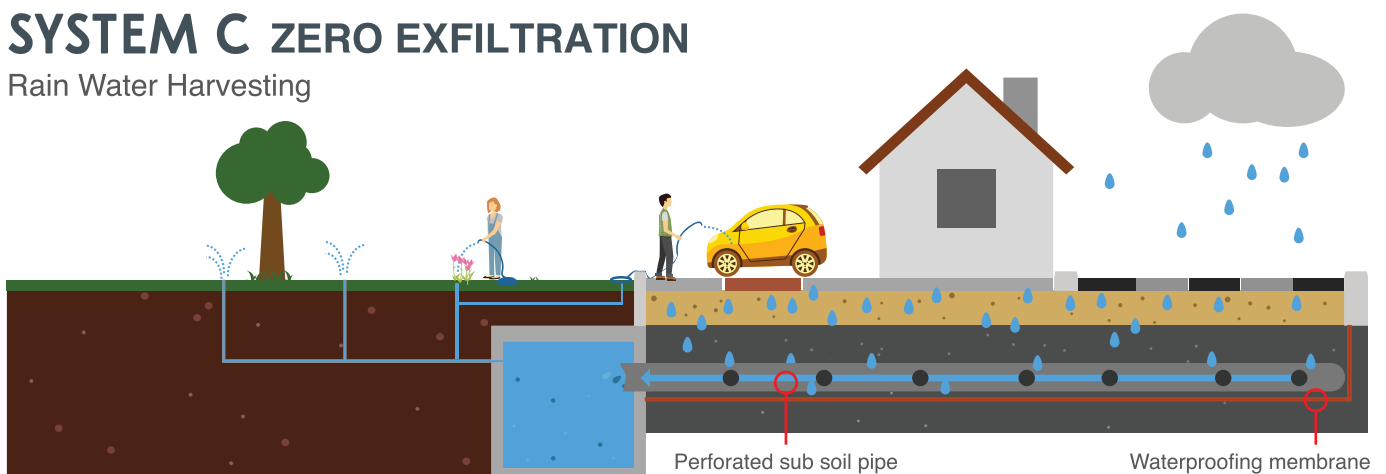
Storm Water Management



This partial exfiltration system allows water to either infiltrate into the ground directly or drained through the perforated sub-soil pipe. The pipes are connected to nearby drainage system to speed up the water discharge, preventing surface water built up at the area. This system works well in area with medium water table and at residential area.

SYSTEM C ZERO EXFILTRATION

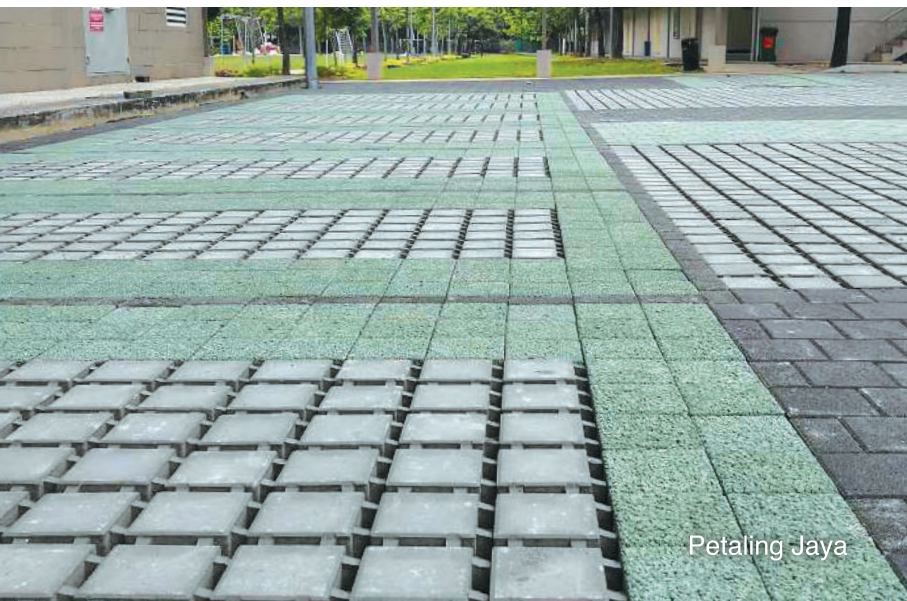
Rain Water Harvesting



This zero exfiltration system capture and retain water above the ground in the permeable sub-base by a layer of waterproofing membrane, and drains through pipe outlets to nearby drainage system or a water treatment system. This system does not only act as a storm water retention basin, it also allows rainwater to be captured and reuse for plants watering and cleaning when it is installed in a park or households. On top of that, it minimizes direct water contamination to the environment by capturing the contaminated water at areas with high pollutant contamination and transfer it to a waste water treatment plant before discharging into drains or river.



Klang



Petaling Jaya



Shah Alam



Kuala Langat

R SERIES

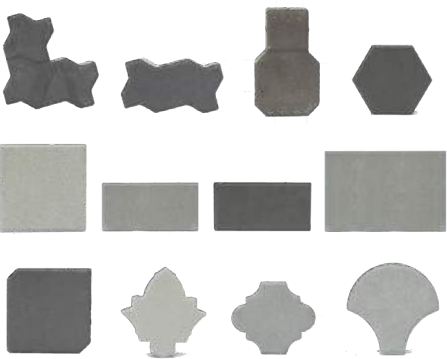
THICKNESS

60MM - 30MPa
80MM - 45MPa

COLOURS



PROFILES



Nusajaya



Seberang Perai



Temerloh



Petaling Jaya



Nusajaya



Nusajaya



Petaling Jaya

TECHNICAL SPECIFICATION

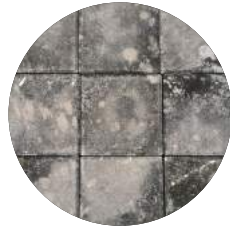
Malaysia's 1st Algae Resistance Interlocking Concrete Pavers (ICP)

Interlocking Concrete Pavers (ICP) by Sunway Paving Solutions Sdn Bhd (SPS) were developed to ensure the surfaces of our ICPs are free from algae growth, as it is commonly happened on almost all other places. Our ICPs are algae resistance up to 80%, where our R&D department has undergone many research over the years and we are proud to say that we are Malaysia's 1st Algae Resistance Interlocking Concrete Pavers since 2013, to have such properties in all of our product range except for Neupave.

Algae Resistance Trial Products since 2013



With Algae Resistance Properties Tested



Without Algae Resistance Properties Tested

Algae growth test result on SPS ICPs

Identification No.	Algae Growth Area (%)	Rating
SPS Control 01	1.6 : Trace of growth	1
Sample 01	0 : None	0
Sample 02	0 : None	0
Sample 03	1 : Trace of growth	1
Sample 04	0 : None	0
Sample 05	0 : None	0

Note: 0: None, 1: Traces of growth (less than 10%), 2: Light growth (10 to 30%), 3: Medium growth (30 to 60%), 4: Heavy growth (60% to complete coverage).

Specification

Thickness	Strength	Application	Tolerance
60mm	30MPa	Pedestrian traffic ie. Footpath, Bicycle Track, Jogging Track, Park & Garden Landscape, Pool Deck, Patio etc	Thickness ±3mm Dimension ±2mm
Z60mm	45MPa	Occasional vehicular traffic ie. Boulevard, Assembly area, Plaza, Buggy Track etc	
80mm	45MPa	Vehicular Traffic ie. Driveway, Drop-off area, Cul-de-Sac, Warehouse, Industrial Area, Temporary Access, Roundabout, Junction, Backlane, Feeder Road, Internal Road etc	
100mm	45MPa	Heavy-Duty Traffic ie. Inland port, maritime port etc	
MS 1380 : 1995 (Specification for Precast Concrete Paving Blocks) BS EN 1338 : 2003 (Specification for Concrete Paving Blocks) BS 6717 : 1993 (Specification for Precast Concrete Paving Blocks)			

Colour Selection

Standard Colour



Red Grey Black

Supreme Colour



Various shades of Antique Green Blue

Premium Colour



White Yellow Peach Light Brown Dark Brown

Added Effect



Shot Blast Blink Shot Blast + Blink

Colours can be custom-made to suit your design requirement.

Finished product colour may vary, subject to the colour of sand, cement and colour pigments used at the time of production.

Efflorescence

This superficial phenomenon is commonly found in most concrete-based or cementitious products. However, this efflorescence effect will disappear over time (weathering) whereby rain usually washes the efflorescence away in about six months to a year and in the worst-case scenario could take up to two years.

INTERLOCKING CONCRETE PAVERS (ICP) STANDARD

	Standard		
	MS 1380 : 1995	BS EN 1338 : 2003	BS 6717 : 1993
Use in	Malaysia only	International	International, (superseded by BS EN 1338:2003, but still accepted in Singapore)
Conformity			
Physical Properties	Length \pm 2mm Width \pm 2mm Height \pm 3mm	Length \pm 2mm Width \pm 2mm Height \pm 3mm	Length \pm 2mm Width \pm 2mm Height \pm 3mm
Compressive Strength	> 45MPa	N/A	> 49MPa
Abrasion	$\geq 1.5^a$	$\leq 23\text{mm}^b$ $\leq 20,000\text{mm}^3/5000\text{mm}^2$ ^c	N/A
Water Absorption	N/A	$\leq 6\%$	N/A
Tensile Splitting Strength	N/A	> 3.6MPa (Failure load >250N/mm)	N/A
Slip/ Skid Resistance	N/A	Minimum value ^d	N/A

Note:

MPa = MegaPascal (N/mm²)

^a Abrasion Test using Drill method (Method no longer practical).

^b Abrasion Test using Wide Wheel method (BS EN 1338:2003 Annex G). Conducted at SPS.

^c Abrasion Test using Böhme Test (BS EN 1338:2003 Annex H). Conducted at SIRIM.

^d Average of three (3) values. Higher value indicates better slip/skid resistance.

INSTALLATION PROCEDURE



Basecourse

Based on the existing sub-grade / soil conditions and the anticipated traffic loading into consideration, an adequate thickness of well compacted basecourse must be provided to ensure good pavement performance. Any existing bituminous or concrete surfaces need not be removed and can act as good base.



Sand Bedding Layer

A layer of sand should be loosely spread and screeded to a uniform thickness such that its compacted thickness would be approximately 30mm. It is important that the layer of sand remains undisturbed prior to the laying of paving blocks.



Laying The Blocks

Paving blocks are placed side by side on the sand bed with gaps of approximately 2mm between adjoining blocks.



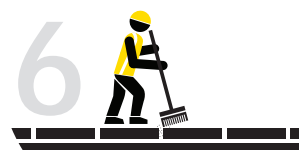
Blocks Cut To Fit

Paving blocks can be cut to fit edges and awkward corners.



Pavement Compaction

Paving blocks pavement is compacted with a hand-guided compactor until it is firmly embedded in the sand layer.

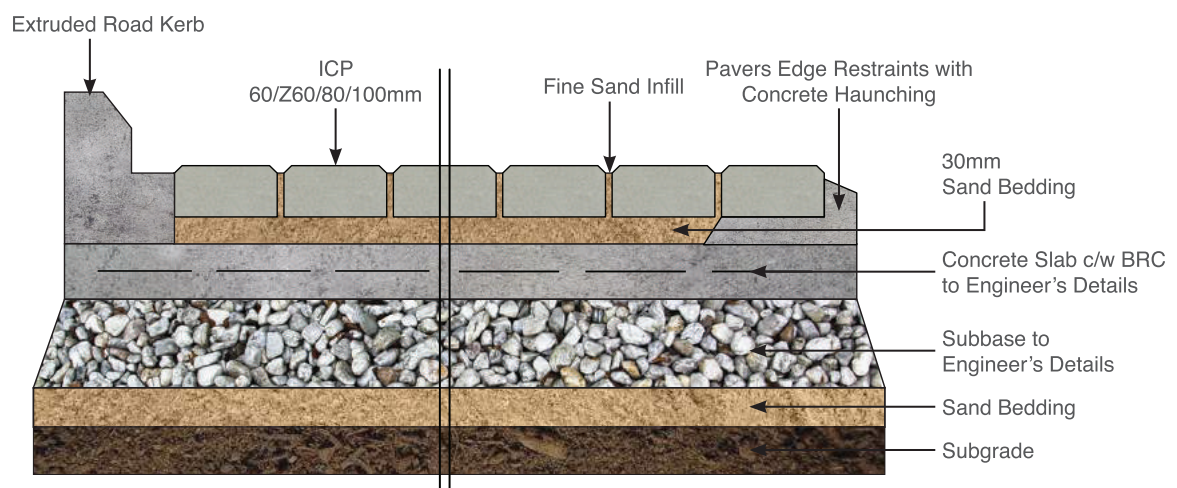
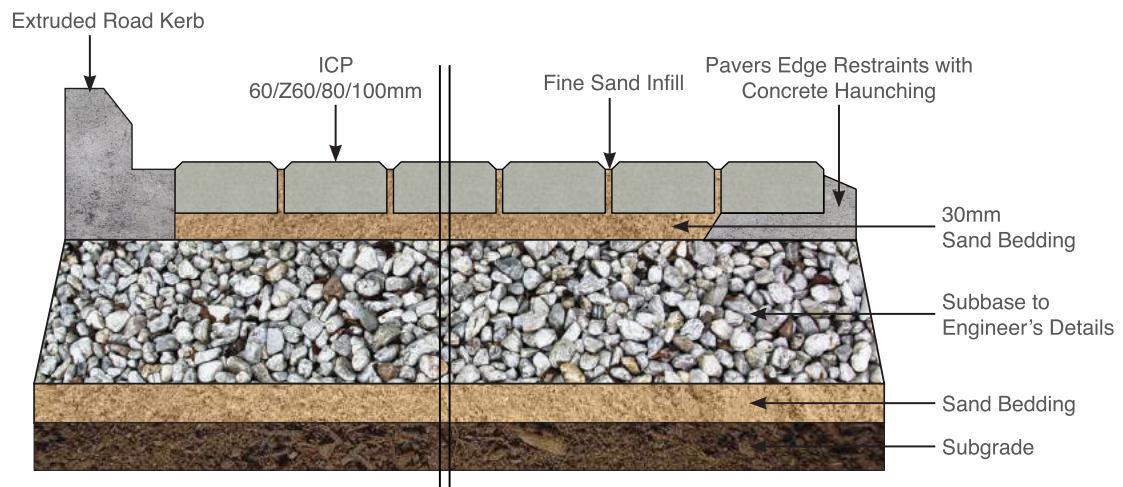


Sand Infill

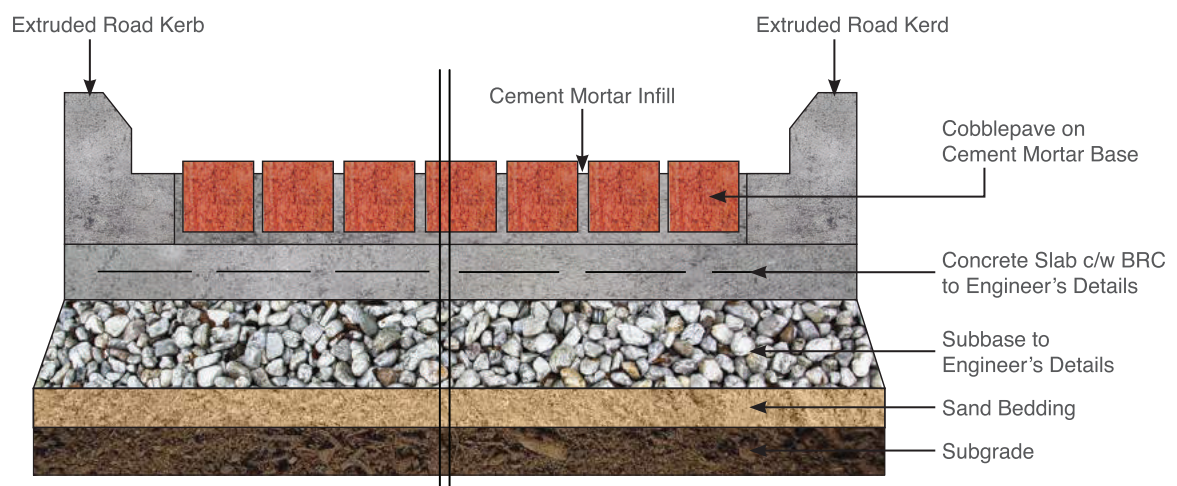
Fine sand is brushed in to fill gaps in between paving blocks. Hand-guided plate vibrator is applied once again to ensure that sand filling in the gaps are fully compacted to stabilize the paving blocks pavement.

TYPICAL CROSS SECTION

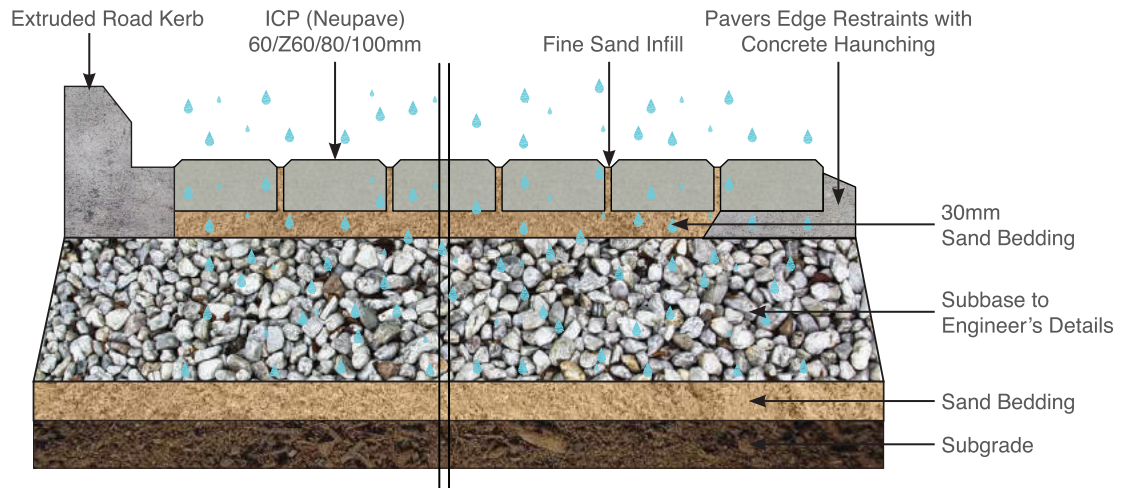
Interlocking Concrete Pavers (ICP)



Cobblepave

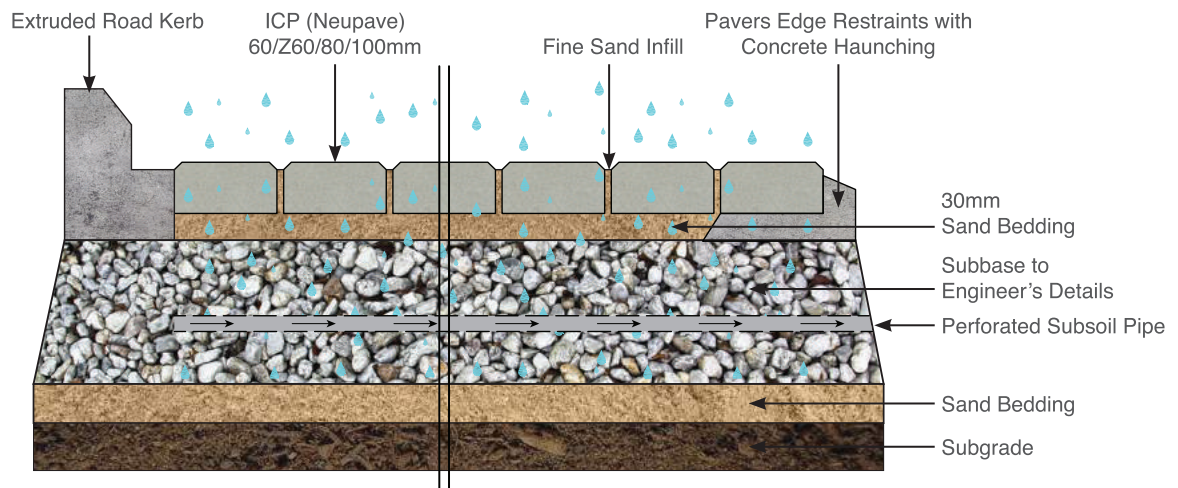


Neupave - System A (Full Exfiltration)



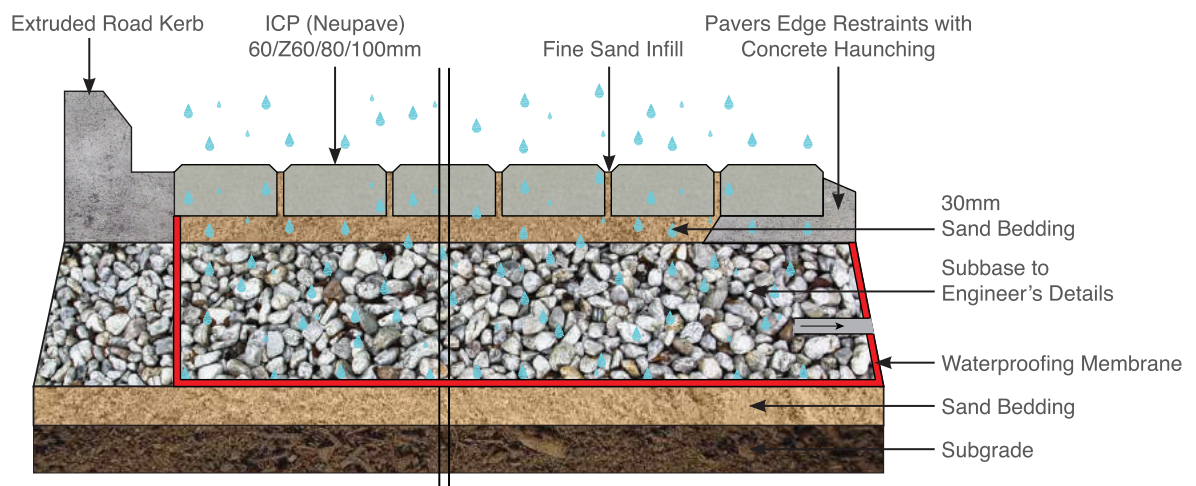
All water falling onto the NeuPave infiltrates down through the pavers, passing through the aggregate layers, and eventually into sub-grade. The sub-base shall act as temporary storage device.

Neupave - System B (Partial Exfiltration)



Similar to System A, but with a series of perforated subsoil pipe at the bottom of sub-base. This is to extract out the remaining water.

Neupave - System C (Zero Exfiltration)



Used for complete capture of water using as waterproofing membrane at the bottom of sub-base. Pipes can be fixed to have restricted outflow from the system.

Note: Subject to engineer's specifications

SUNWAY®

BUILDING MATERIALS

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BEST EMPLOYERS
 MALAYSIA | 2016

AON®
BEST EMPLOYER
 MALAYSIA | 2018

Singapore Distributor:



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 Green Product Awards
NEUPAVE



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