

A photograph of a person's legs and feet walking on a permeable gravel path. The path is made of small, light-colored stones. To the right of the path is a concrete curb and a grassy area. The background is slightly blurred. The text 'New Dawn Permeable Paving' is overlaid on the top right of the image in a large, bold, black font with a white outline. The text is partially covered by a yellow and orange graphic element.

New Dawn Permeable Paving

Permeable paving you can
rely on!

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Welcome to New Dawn!

Welcome to New Dawn Permeable Paving!

You've picked up our introduction booklet, so we thought we should introduce ourselves properly to you.

We're the founders of New Dawn, and our passion is permeable paving.

We started New Dawn in 2014 as a specialist permeable paving installation business, and that's exactly what we've been doing ever since.

We pride ourselves on our personal touch. You'll deal directly with us, the owners and directors. All our work is completed in-house by our team of highly trained employees. There's no subcontracting of work, no botched installations, just permeable paving done properly by industry specialists.

We hope this booklet shows you our personal touch and professional capabilities. But to experience the New Dawn Difference, just get in touch today!

(03) 9543 3013 – info@newdawnpaving.com.au

...from

**Mike and Dawn
Directors**



What do we do?

Permeable Paving

Here at New Dawn, permeable paving is what we do. We are Melbourne's premier permeable contractor, installing jobs large and small.

Whether you're building a streetscape or a university, several apartments or units, or a new house or renovating a garden, we're here to help.

Our permeable paving installations and capabilities range from thousands of square metres on a tight commercial deadline, to just dozens of metres for paths and patios, and everything in-between.

We install Pebble Pave resin-bound permeable paving, an Australian designed and made resin-bound aggregate paving. Kiln dried rocks are bound with a UV-stable clear resin.

All our permeable paving is installed on a reinforced permeable concrete base. Our custom 25 MPa permeable concrete features hot-dipped galvanised reinforcing steel in all applications for maximum peace-of-mind.

The result? Permeable paving as strong and good-looking as exposed aggregate concrete.

See it for yourself:

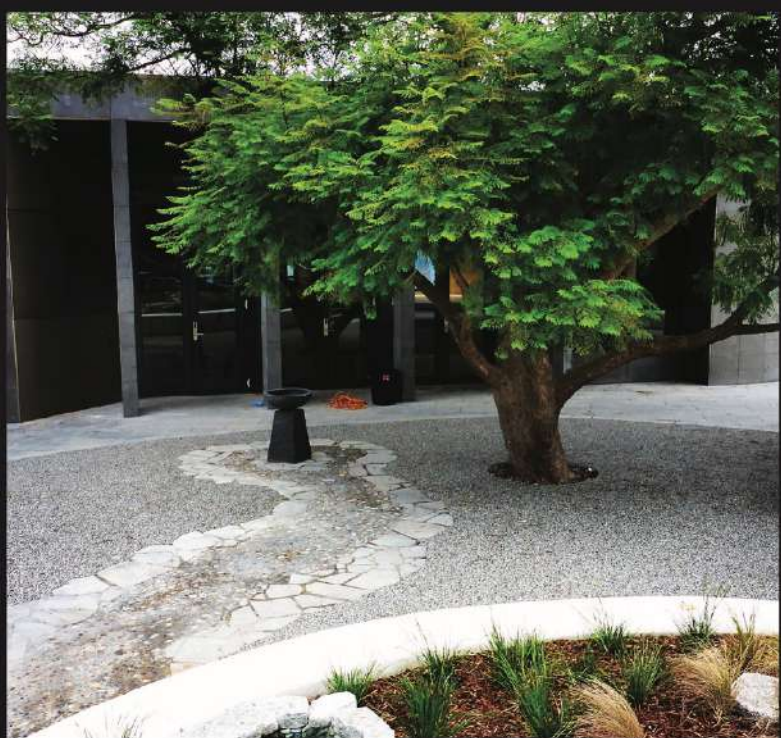
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@newdawnpaving

Commercial, multi-unit, domestic and residential



Permeable Paving Colours and Finishes

This section aims to introduce the wide range of possible permeable paving colours we can supply and install.

The colours presented are by no means the limit of what we can do. Up to four aggregates can go into each mix. See the final page on custom mixes for more information.

How to choose an aggregate colour

We use a wide range of aggregate colours, and ultimately the choice is up to you. However, we do recommend the final use of the pavement is taken into consideration.

For “heavy” traffic areas such as car parks or large driveways, a darker colour should be used to hide the expected dirt and grime.

Darker colours will also absorb more warmth from the sun, so around poolsides and in sunny outdoor living areas, lighter colours should be used.

Aggregate Sizes

Both large (-6/+3 mm) and small (-3/+1.6 mm) aggregates are used. We customise the ratios depending on the pavement use.

For around poolsides, we recommend using a higher ratio of small aggregate to make the paving smoother underfoot.

Slip Resistance

Pebble Pave permeable paving is rated P5 non-slip under Wet Pendulum Testing as per AS 4586:2013(A).

For more information

newdawnpermeablepaving.com.au

ndpp.com.au/youtube



@newdawnpaving

Permeable Paving Colours and Finishes



Midnight

The cornerstone of our dark colours, Midnight gives a dark, stunning driveway.

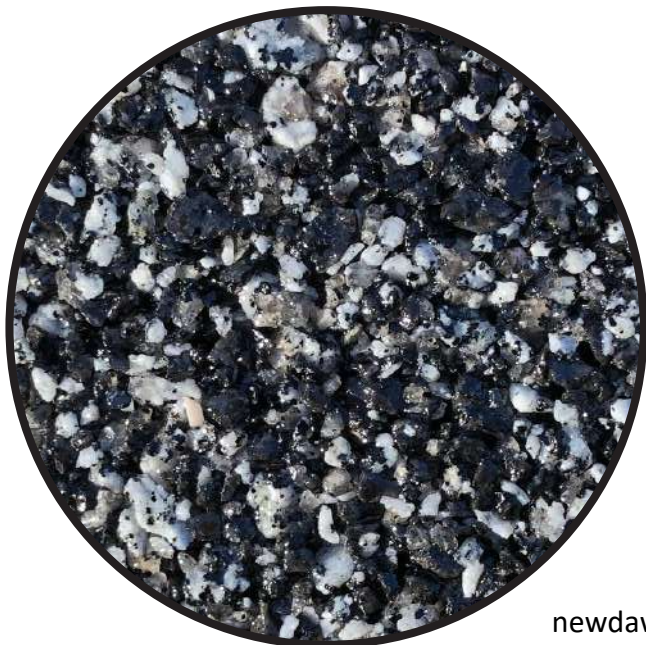
The black base makes it suitable for very high traffic applications, helping to hide the dirt of heavy use.

Midnight works extremely well both with designs based on neutral colours, and as a simple contrast to more colourful palettes.

Midnight Gold

A warmer version of Midnight, the inclusion of golden brown aggregate makes Midnight Gold an excellent choice in landscapes featuring outdoor timber accents.

Again, the black base helps hide dirt, making Midnight Gold suitable for very highly trafficked areas.



Raven

A lighter version of Midnight, a 50:50 mix of black and grey aggregates giving the appearance of a mottled dark grey mix.

The black base makes it suitable for very high traffic applications, helping to hide the dirt of heavy use.

Permeable Paving Colours and Finishes



Silver Ash

Silver Ash is our most popular mid-grey, and is 100% Victorian crushed granite.

Whilst appearing light, the darker flecks through the aggregate help hide dirt and grime, making Silver Ash appropriate for heavy use areas.

As a neutral grey, Silver Ash is appropriate in both neutral and colourful palettes.

Glacier

Glacier is a light- to mid-grey with flecks of white. The light, neutral tones of Glacier make for a clean, crisp paving surface.

Glacier is suitable for driveways, however lighter colours can show dirt more. For heavy traffic areas, consider Silver Ash or a custom mix.



K-Blue

A darker grey, K-Blue is an aggregate similar in colour to a dark bluestone.

As a darker grey, K-Blue is a great option for heavier use areas such as driveways, car parks and streetscapes.



Permeable Paving Colours and Finishes



Autumn

Autumn is a mid-grey base with flecks of yellow and black

Perfect for a driveway, as the darker base helps hide the usual dirt expected for a regularly trafficked surface.

Pair with light yellows or timbers with a lighter grain such as Stringybark or Silver Top Ash .

Aztec

Aztec is a mid-grey base with earthy golden brown. This subtle combination of colours makes for a very natural looking permeable surface.

The dark mottled tones make Aztec suitable for heavy traffic areas. Aztec is an excellent choice for bush settings or in native-style gardens.



Rockpool

Browns, yellows and greys meet in Rockpool, making reference to Australia's beautiful coastline. Pair it with timbers and pebbles for the perfect coastal look.

The dark grey base makes it suitable for high traffic applications, helping to hide the dirt of heavy use.



Permeable Paving Colours and Finishes



Sahara

Sahara is a light grey with flecks of yellow and cream throughout. With a grey base, Sahara is a great choice for lighter coloured driveways.

As a light colour, Sahara will remain cooler underfoot during hot Australian summers. Pair with timber or other natural stone such as light granites or travertines.

Seashell

Seashell is a blend of yellows with little to no greys or whites.

As a lighter colour, Seashell is an excellent choice for pool surrounds as it will remain cooler in the summer sun.

Seashell looks fantastic when paired with sandstone or travertine blocks, pavers and coping tiles.



Sunset Gold

If you're after yellow, then Sunset Gold is what you need! The brightest of our yellows, Sunset Gold makes for a paving surface reminiscent of golden beaches.

It can also be used in custom blends to provide a strong yellow accent.



Permeable Paving Colours and Finishes



Stonefield

Stonefield is a dark, earthy brown. It can be used both by itself, and to provide earthy tones in custom mixes.

Stonefield is perfect for a driveway and paths in dirty and dusty areas.

Green Granite

A natural Australian Green Granite, this aggregate is a subtle green that forms a highly durable interlocked surface.

Green Granite is suitable for projects such as maintenance-free nature strips and conforms with VicRoads' standards.



Green Marble

A more intense green, this naturally coloured Green Marble gives a vivid dark green paving surface.

This Green matches the deep green of well maintained grass, and can help car parking blend into public park spaces.



Permeable Paving Colours and Finishes

Custom mixes

We know that getting the right colour can often be difficult. That's why we offer custom mixes (blends of our standard aggregates) at no extra cost.

Up to four aggregates can be combined in a mix, making for a near-infinite range of possibilities. If you can think of a natural stone colour, we can get it or match it.

We can also match most colours of exposed aggregate concrete.

Specialty Aggregates

Looking for something a bit different? We have a large network of aggregate suppliers both in Australia and overseas, and can source a range of round pebbles, specialty aggregates and recycled coloured glass as needed. Please get in touch with us for more information or to discuss your requirements.



Permeable Paving Specifications

Here at New Dawn, we're very particular about how we install our permeable pavements. But what else would you expect from a permeable paving specialist?

The next section shows in detail our installation methodology for a variety of applications, as well as drainage requirements.

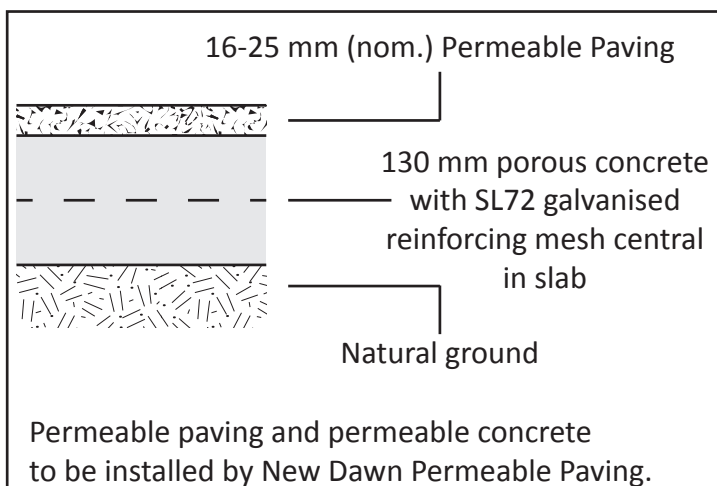
The hero of all of our pavements is the custom 25 MPa permeable concrete base that we install. This contains in almost all instances hot-dipped galvanised reinforcing mesh, SL72 as a minimum and higher as required.

Along all exposed edges, an edge restraint is required. As standard we install a galvanised steel edge restraint, an edge designed and manufactured to our exacting specifications. Anchors are attached on the internal edge, and once the permeable concrete base is poured the edge becomes an integral part of the pavement. The resin bound paving is then trowelled flush to the top of the edge. Alternatively, we can also rebate the permeable concrete base to allow the installation of brick or paver borders if desired.

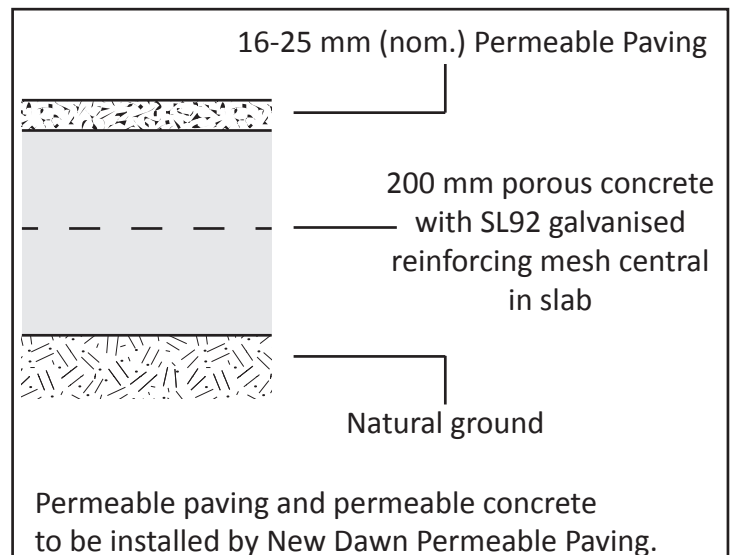
The key to pavement stability is the excavations and base installation. Absolutely no FCR crushed rock or other unapproved fill material should be placed under the pavement as the fines can easily migrate with water flow causing settling. We offer a full excavation service as required to ensure perfect pavement placement.



Domestic Grade



Commercial Grade



Site specific conditions can apply, contact New Dawn for more assistance

newdawnpermeablepaving.com.au

Permeable Paving Domestic Grade

This permeable paving specification is for domestic driveways and pathways. It's designed and reinforced to tolerate domestic vehicular loadings.

An edge restraint is always recommended for permeable paving installations. Any standard landscaping edge including timber, aluminium, steel or pavers can be utilised.

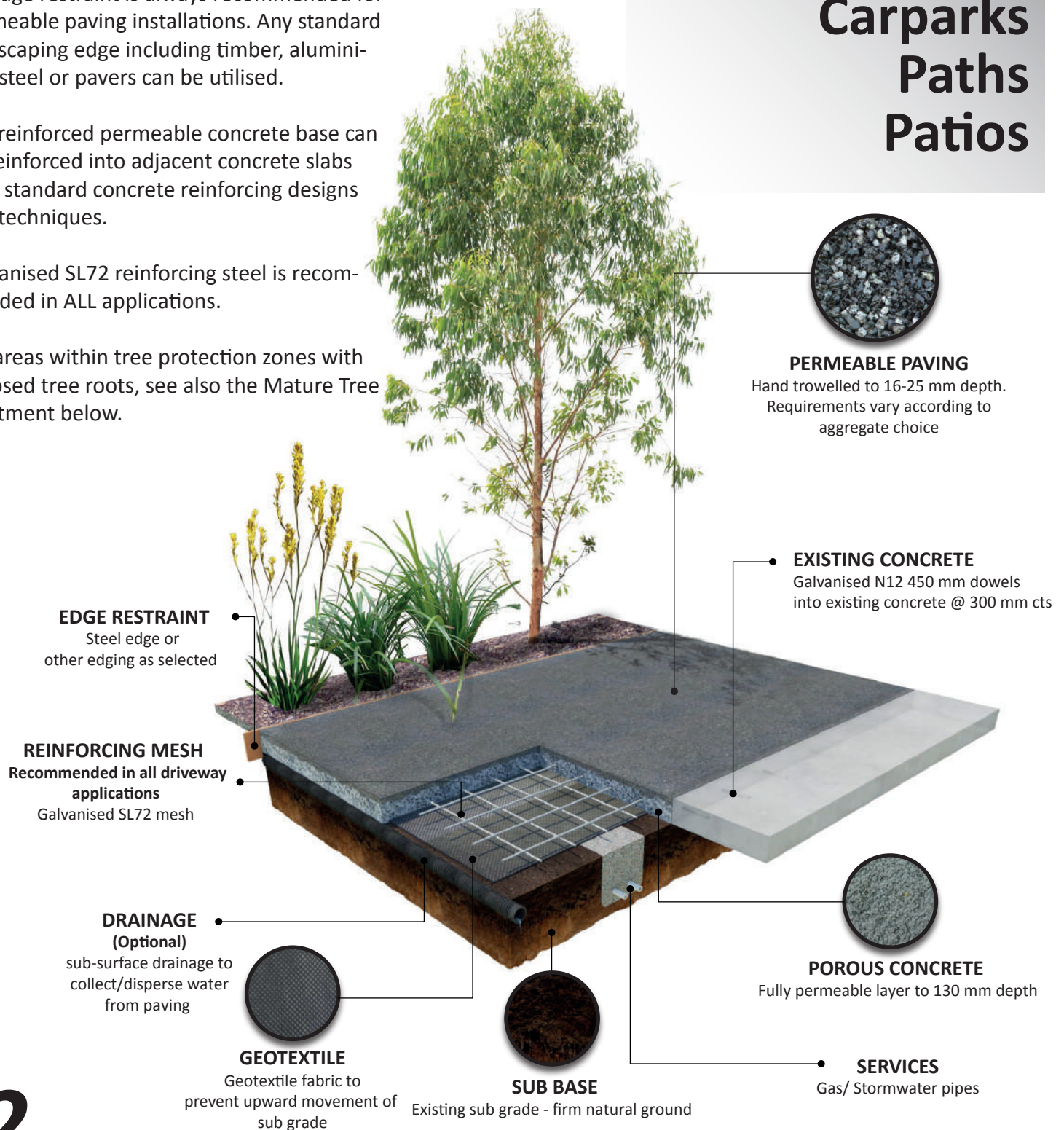
The reinforced permeable concrete base can be reinforced into adjacent concrete slabs with standard concrete reinforcing designs and techniques.

Galvanised SL72 reinforcing steel is recommended in ALL applications.

For areas within tree protection zones with exposed tree roots, see also the Mature Tree Treatment below.

Applications:

Driveways
Multi-unit sites
Carparks
Paths
Patios



Permeable Paving Commercial Grade

This permeable paving specification is designed for commercial and industrial areas where heavy traffic is expected.

This permeable paving is suitable for commercial car parks, accessways and roads.

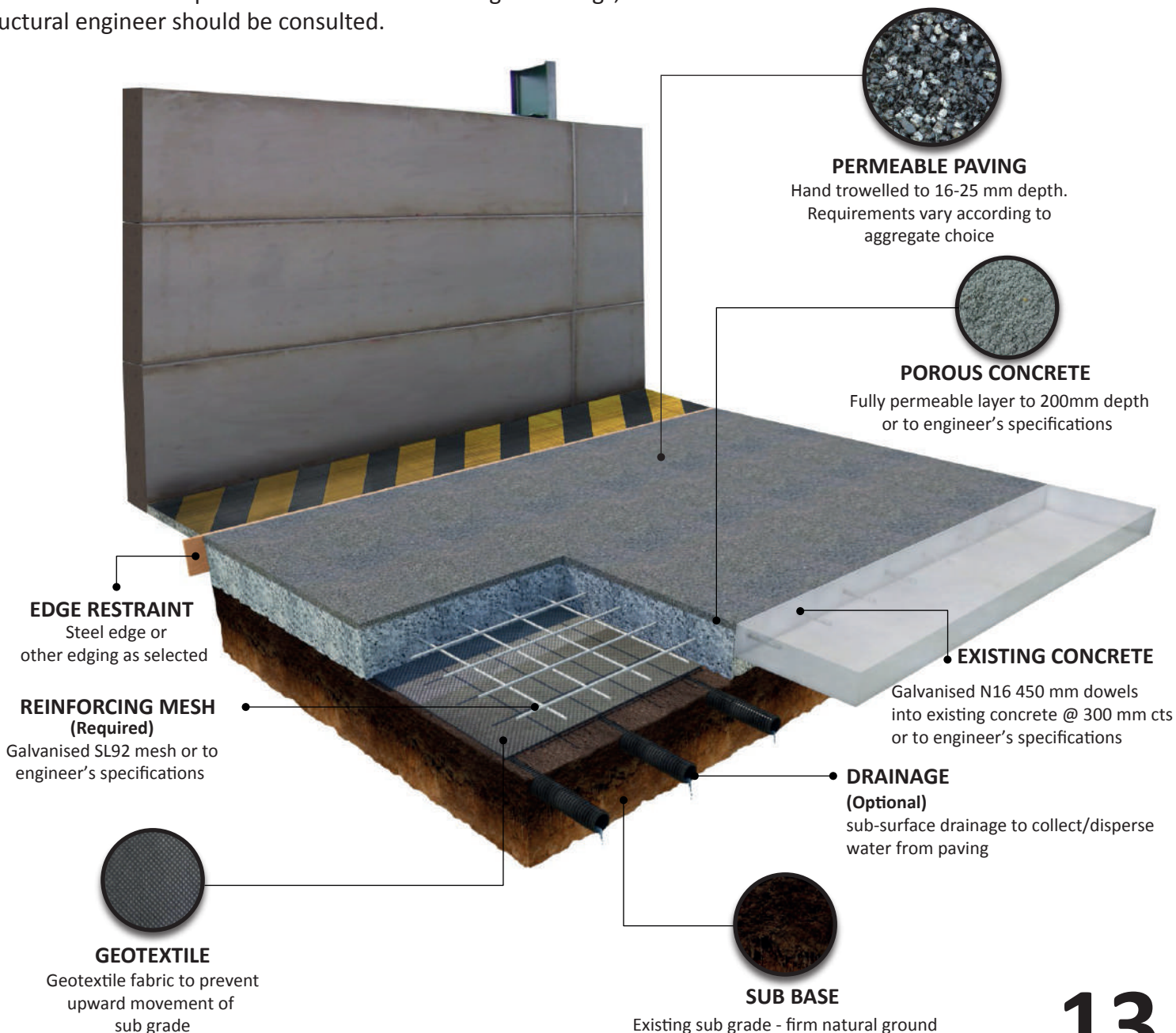
The permeable concrete base is thickened to a minimum of 200 mm, and a higher grade (SL92) of galvanised reinforcing steel.

For areas within tree protection zones with exposed tree roots, see also the Mature Tree Treatment.

Please note: for site-specific maximum vehicle weight loadings, a structural engineer should be consulted.

Applications:

Multi-unit sites
Roads
Car Parks
Accessways



Permeable Paving Around Mature Trees

This permeable paving specification is designed for paving installations within tree protection zones (TPZs).

In the TPZ where there are generally few exposed tree roots, a standard permeable concrete base is utilised. (For concrete specifications, refer above to either the domestic or commercial specifications).

Any raised tree roots outside of the structural/critical root zone are bedded in granitic sand, and stabilised with Geogrid fibreglass reinforcing mesh.

Within the structural/critical rootzone and ONLY once raised tree roots are encountered, granitic sand is used for the paving base. Inclusion of geogrid reinforcing within the permeable paving enhances flexibility and tolerance of root movements.

For tree surrounds within footpaths, streetscapes and carparks, refer to the Streetscape Tree Surround Specification.

Application:

Within Tree Protection Zones



Permeable Paving Streetscape Grade

This permeable paving specification is designed for tree surrounds in pavements, car parks and other areas with occasional vehicular traffic.

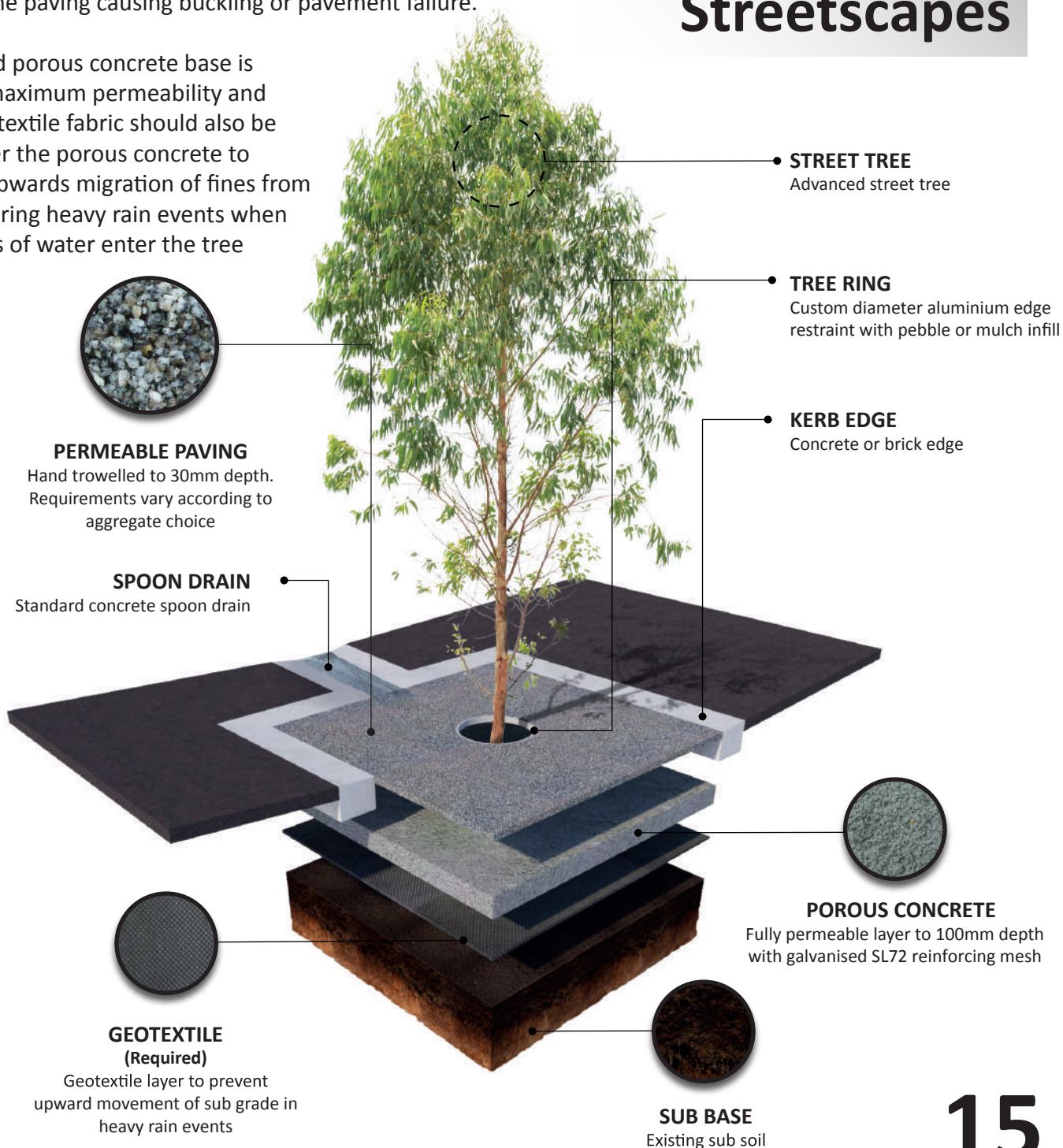
The higher permeability of porous concrete vs. traditional paving bases (such as sand or crushed rock) makes it suitable for areas where large amounts of water will be directed into the pit.

The aluminium ring allows the tree trunk to grow without exerting pressure on the paving causing buckling or pavement failure.

The reinforced porous concrete base is installed for maximum permeability and strength. Geotextile fabric should also be installed under the porous concrete to prevent the upwards migration of fines from the subsoil during heavy rain events when large amounts of water enter the tree surround.

Applications:

Car Parks
Pavements
City Centres
Streetscapes



Permeable Paving Subsurface Drainage

A good permeable pavement should drain significant quantities of water immediately through both the paving layer and paving base. This means that in all but the heaviest of rain events, very little water remains on the surface of the paving. But what implications does this have for drainage? Do you still need surface drains for permeable paving? And do you need subsurface drainage?

WATCH HERE: <http://ndpp.com.au/youtube> – water draining through our permeable paving

Do you need surface drainage in a permeable pavement?

Short answer, yes. But not as many as in an impermeable pavement.

Whilst a good permeable pavement will **usually** drain all water through it, we can't predict the weather! Surface drainage provides an additional safety net in preventing flooding off of the pavement in very heavy rain events.

We also can't predict the future usage of the pavements we install. Whilst a good permeable pavement shouldn't block under normal use, if something like sand is spilt on the pavement causing surface blockage, surface drains then become extremely important.

Surface drains also provide access points for cleaning the stormwater system should it become blocked in the future.

It's for these reasons that most councils in Melbourne (who love permeable paving for the environmental benefits) still require surface drainage and surface falls on permeable pavements.

Do you need subsurface drainage?

The answer to this question is a little bit more complicated and depends on a variety of site-specific factors. So, we'll have a look at a few different scenarios. Remember, the primary aim of permeable paving is to get as much water to drain into the ground and water table as possible.

The best "rule of thumb" is visualise the pavement not as paving, but as a normal "soft" landscape element such as grass or a garden bed - and if you wouldn't need subsurface drainage, then you probably don't need it.

Sandy soils (with high drainage rates)

On sandy soils, soils that are free draining and relatively stable, then generally no subsurface drainage is required. Even in heavy rain events, the high drainage rates of the subsoil will be able to dissipate the water under the paving.

Clay soils (with low drainage rates)

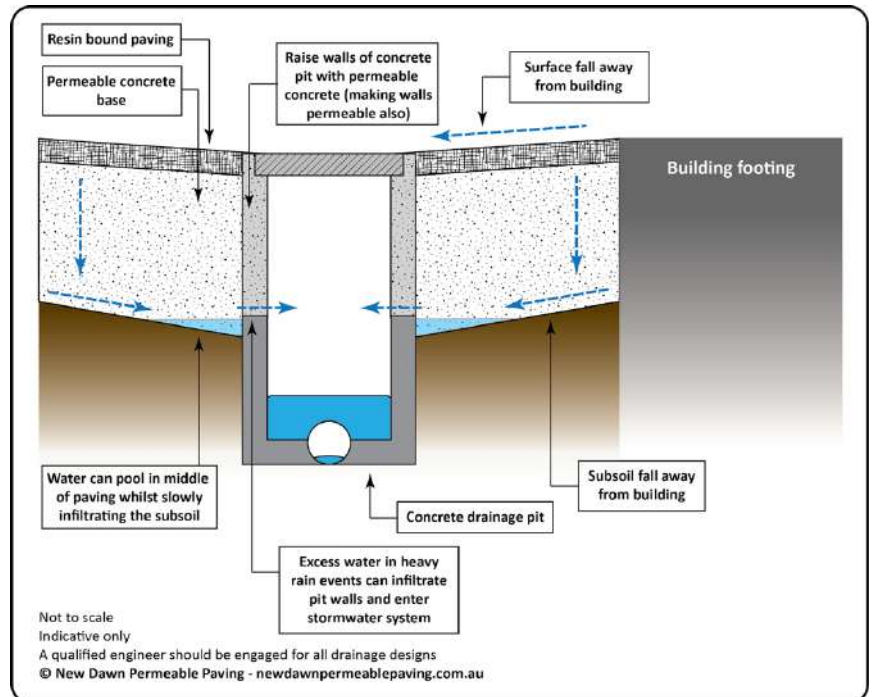
On clay soils, the low drainage rates and more reactive soils mean that the decision whether to include subsurface drainage is a lot more complicated and is generally dependent on the gradient of the site. A variety of common scenarios are presented below.

Permeable Paving Subsurface Drainage

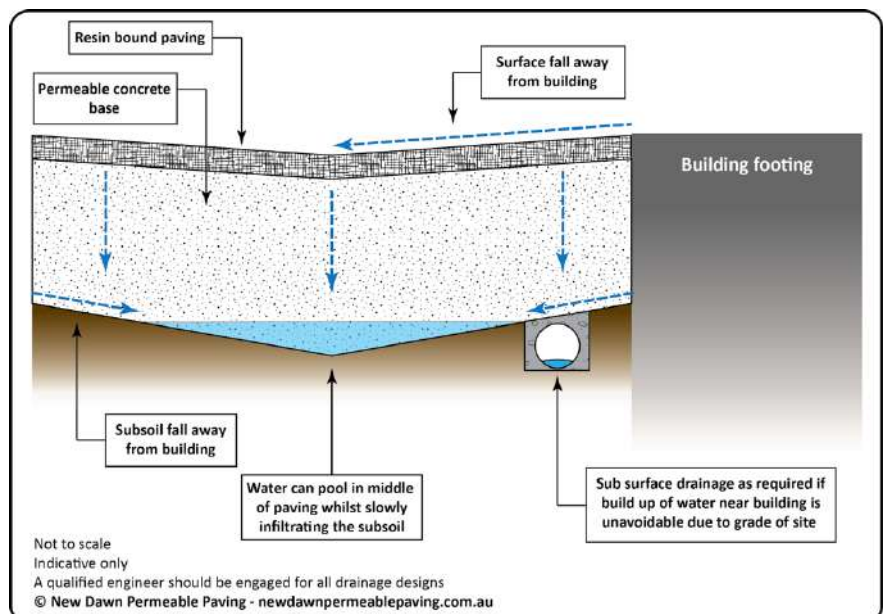
On a flat site, or a site where ground falls away from the building

On a flat site, requirements for subsoil drainage are generally limited. Because the majority of water build up will occur on the slow-draining subsoil, it is essential that the subsoil is graded away from any building footings. It's absolutely fine for water to build up in the permeable paving whilst waiting to slowly dissipate into the soil below, just as long as precautions are taken to protect adjacent structures and footings.

Normally on new developments in Melbourne, concrete pits are installed in all driveway areas as part of the drainage design. These pits typically need to be raised to finish surface level during driveway installations. During our permeable driveway pours, these pits are raised with permeable concrete which makes the walls permeable. If the subsoil can be graded towards the pits, then in heavy rain events when subsoil drainage rates cannot cope with the volume of water present, excess water can drain into the drainage pits through the permeable walls.



In areas where there are no concrete pits (**such as in tree protection zones where trenching is forbidden**), then the grading of the subsoil needs to take into the account the expected amount of water that might puddle there. If building footings are of a concern, then additional subsoil drainage around the building footings may need to be installed.

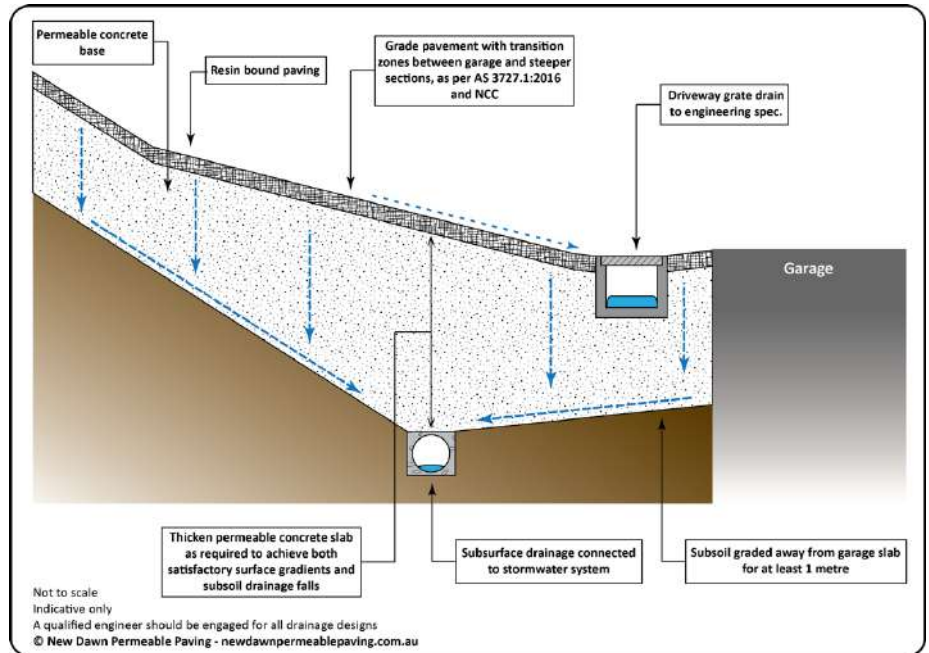


Permeable Paving Subsurface Drainage

On a site that falls towards the buildings

On a site where the building is lower than the street and the driveway must slope down towards the building, then subsurface drainage is required. **As a broad “rule of thumb”, anywhere you would need a surface strip drain, you will need subsurface drainage too.**

But the location of the subsurface drainage isn't the same as the location of the grate drain. When considering the location of the subsurface drain, it should be remembered that a build-up of water could occur in the paving. Therefore, the surface drain should be located slightly further back from the garage slab (e.g. a metre or two) to prevent build-up of water directly adjacent to the garage footings. We also grade the subsoil back away from the garage towards the subsurface drain. Then finally, in order to achieve satisfactory driveway gradients, we thicken the permeable concrete base over the subsurface drain.



What sort of subsurface drains should you use under a permeable pavement?

The design of the subsurface drainage should normally be part of scope of works for the project engineer. However, designers and engineers often omit permeable paving details due to a lack of standards for permeable paving.

Therefore we recommend that all subsurface drainage should utilise as a minimum 100 mm “AGI pipes” that are socked with a geotextile fabric to prevent blockage with fines over time, and to ensure good flow rates. All drainage trenches should be backfilled with a non-compressible, free draining material such as 14 mm bluestone screenings, or permeable concrete during the driveway pour.

If an installation is steep, on silty or sandy soil, or has a large amount of critical subsurface drainage, then a geotextile blanket (nonwoven A24 as a minimum) should also be installed over the subgrade to prevent the migration of fines under the pavement and/or blockage of the drainage system.

The subsurface drainage should also only be installed after the driveway excavations are completed, to ensure satisfactory subsoil grading.

We are able to complete subsoil drainage works as part of our excavation service, or they can be installed between the excavations and driveway pour by the project plumbers.

Permeable Paving Warranty and Aftercare

Aftercare and Maintenance

Thank you for choosing New Dawn Permeable Paving for your project. We hope you are extremely satisfied with the final result!

Whilst every effort has been made to ensure that Pebble Pave permeable paving is a high quality, extremely durable outdoor surface, in order to maintain your lifetime warranty we do require you to follow our aftercare and maintenance instructions.

Post-installation, prior to building site handover

Your new permeable paved area has the same strength and durability as a high quality decorative exposed aggregate concrete. However, the open void structure of the paving does mean that certain precautions need to be taken to protect it from damage.

Paint, concrete, render, mortar and any other "liquid" material should be prevented from spilling on the paving - if it dries in the gaps of the paving it becomes extremely difficult to remove. Cover any work areas with builders plastic or protective boards. If any material is spilled, then hose through the paving with copious amounts of water immediately.

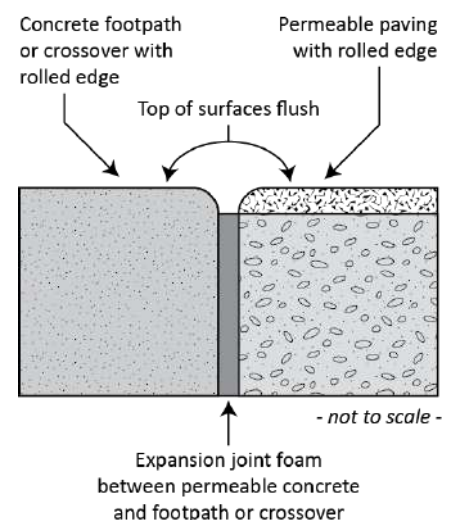
Care should also be taken to protect the voids of the permeable paving during landscaping. If large amounts of sand or soil are dumped on the paving, it can block the permeable gaps in the paving. ***Avoid dumping soil, sand or landscape materials on the paving where possible***, or cover the paving with boards or plastic if it is unavoidable.

Your permeable paving is a resin bound surface. Whilst highly durable as a driveway, certain solvents and cleaning agents can damage and degrade the binding resin. ***Contact of solvents, paint thinners, fuels, sealers and oils with the paving should be avoided. If spills occur, they should be washed immediately with soapy water. Failure to do so can cause degradation of the resin-bound surface.***

Crossover and footpath installation

Your permeable driveway, if installed before the crossover and footpath, will be finished with a protective temporary board at the front. Once crossover excavations are completed, the board should be removed. The crossover should then be installed as per the diagram to the right.

Care should be taken to prevent the surface of the permeable paving from concrete splatter – cover the surface with plastic, and hose off any spills immediately.



Permeable Paving Warranty and Aftercare

Cleaning your permeable paving

To clean your paving surface, first sweep clean the surface with a stiff broom or blower, before hosing through any dust and dirt.

Pressure washers should not be used as it can force material into the paving and block the voids.

Any stubborn stains should be washed with warm soapy water and a stiff brush. ***Solvents and wire brushes must be avoided, and any damage cause by this is not covered by our warranty.***

Any cement stains can be washed with dilute hydrochloric acid. Ensure the area is thoroughly rinsed with water after cleaning to prevent damage to the permeable concrete base.

To maintain permeability, use a normal garden hose to saturate the Pebble Pave area to flush out any silt sitting in the voids. Once every 3 months is sufficient.

As unlikely as it is, if any weeds should grow through or on the Pebble Pave, treat with Roundup or similar herbicide in accordance with the manufacturers instructions. Allow to die back fully before pulling out of the Pebble Pave.

Caring for your permeable paving

Just like any natural stone or quality exposed aggregate concrete, your Pebble Pave benefits from periodic resealing. Resealing keeps your paving looking great, and to help strengthen the surface over time.

New Dawn Permeable Paving, using our paving binding resin, must carry out any resealing. Resealing with "standard" concrete sealers causes irreparable damage and is not covered by our warranty.

If resealing is carried out at the scheduled intervals below, then New Dawn Permeable Paving will extend your warranty by the resealing interval (e.g. a standard two year driveway warranty will be renewed for another two years). ***To determine your resealing frequency, refer to your warranty certificate issued upon completion of works.***

Resealing frequencies	
Heavy use driveway	Every 12 months
Domestic driveway	Every 24 months
Pedestrian grade paving	Every 36 months

Thanks again for choosing New Dawn Permeable Paving. Feel free to contact our office on (03) 9543 3013 with any maintenance or warranty questions.

Permeable Paving Warranty and Aftercare

Pebble Pave Warranty

Thank you for choosing to install Pebble Pave with New Dawn Permeable Paving. This warranty applies to all physical materials supplied and installed by New Dawn Permeable Paving (an authorised Pebble Pave installer).

What does this warranty cover?

This limited warranty covers any defects in material or workmanship under normal use during the warranty period. Normal use and maintenance are defined in the *Permeable Paving Aftercare and Maintenance* document attached.

What will we do to correct problems?

During the warranty period, New Dawn Permeable Paving will repair, at no charge, the faulty area of the product that proves defective because of improper materials or workmanship, under normal use and maintenance. New Dawn Permeable Paving will repair the area in which the fault has occurred using only new materials.

How long does the coverage last?

The warranty period for the physical materials supplied and workmanship carried out by New Dawn Permeable Paving is the resealing frequency: typically 1-3 years from installation completion date. This warranty can be renewed upon resealing for the lifetime of New Dawn Permeable Paving so long as the aftercare instructions stipulated in the *Permeable Paving Aftercare and Maintenance* document are upheld.

Any repair works and materials assume the remaining warranty of the original physical materials and workmanship.

What does this warranty not cover?

This warranty does not cover any problems that arise due to:

Damage not resulting from defects in materials or workmanship – this includes resin damage due to contact with solvents and fuels. Please refer to the *Permeable Paving Aftercare and Maintenance* document for more details

Damage caused by other trades on site, post installation but prior to handover – for example, damage during crossover installation or paint and render spills. Refer to the *Permeable Paving Aftercare and Maintenance* document for advice on protecting the permeable paving.

Acts of nature resulting in ground movement under product – any new permeable paving is installed on a reinforced permeable concrete base, the strongest permeable foundation on the market. However natural ground movements do occur and can cause cracking. New Dawn Permeable Paving always endeavours to install paving in a manner to mitigate against and control significant movement, but cannot warrant against it happening.

Permeable Paving Warranty and Aftercare

Avoidable structural failure of any base installed by New Dawn Permeable Paving – your permeable paving is designed for a certain application (pedestrian, domestic grade or commercial grade vehicular use). Any use beyond the designed application is not covered under this warranty

Any failure of any base not installed by New Dawn Permeable Paving – any permeable paving laid over an existing substrate (including driveway resurfacing) is only as strong as that substrate. New Dawn Permeable Paving will endeavour to advise if a surface is suitable for resurfacing, but cannot warrant the performance, or against failure, of that substrate.

Abnormal use or maintenance – including excessive dry turning in the same spot. All clients will be issued with the *Permeable Paving Aftercare and Maintenance* document. Any failure to adhere to this guidance will void this warranty.

Excessive damage due to failure to notify the contractor when the problem first arises - Resin bound paving is similar to asphalt and will continue to unravel at a faster rate once the initial damage is caused.

What you have to do to obtain warranty service:

To obtain warranty service, you must first contact us via email or phone to arrange a time for us to inspect the problem. We will determine what caused the defect, and the most appropriate way in which to rectify the matter if it is deemed a warrantable defect as outlined above.

New Dawn Landscapes Pty Ltd trading as New Dawn Permeable Paving

ABN: 57 170 837 483

Nothing in this document should take away or restrict any rights which a consumer has as defined in the Australian Consumer Law Act under that legislation.

Get in touch today

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newdawnpermeablepaving.com.au



@newdawnpaving