

**TOUGHEN YOUR TERRAIN**

**DIAMOND GRID**  
**INFORMATION &  
INSTALLATION GUIDE**



**DIAMONDGRID™**

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FOR A SOLID SURFACE ANYWHERE



# WHO WE ARE.

Diamond Grid is a global market leader in surface stabilization and erosion control systems. The grid has been engineered to reinforce ground surfaces, improve soil stability and provide cost effective solutions with superior performance and environmental attributes when compared to traditional surface solutions, such as concrete. It is also highly versatile and used extensively across the rural, mining/civil and landscaping industries.

Diamond Grid systems save cost and reduce construction time, while minimizing environmental impact and reducing ongoing maintenance costs. Developed out of 100% recycled materials, built to withstand loads of over 100+ tons/sqft filled. Diamond Grid is manufactured worldwide to the highest quality, with all of our factories meeting ISO 9001.

## TOUGHEN YOUR TERRAIN WITH DIAMOND GRID

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100+

TONS/SQFT FILLED  
CRUSH RESISTANCE

30

TONS/SQFT EMPTY  
CRUSH RESISTANCE

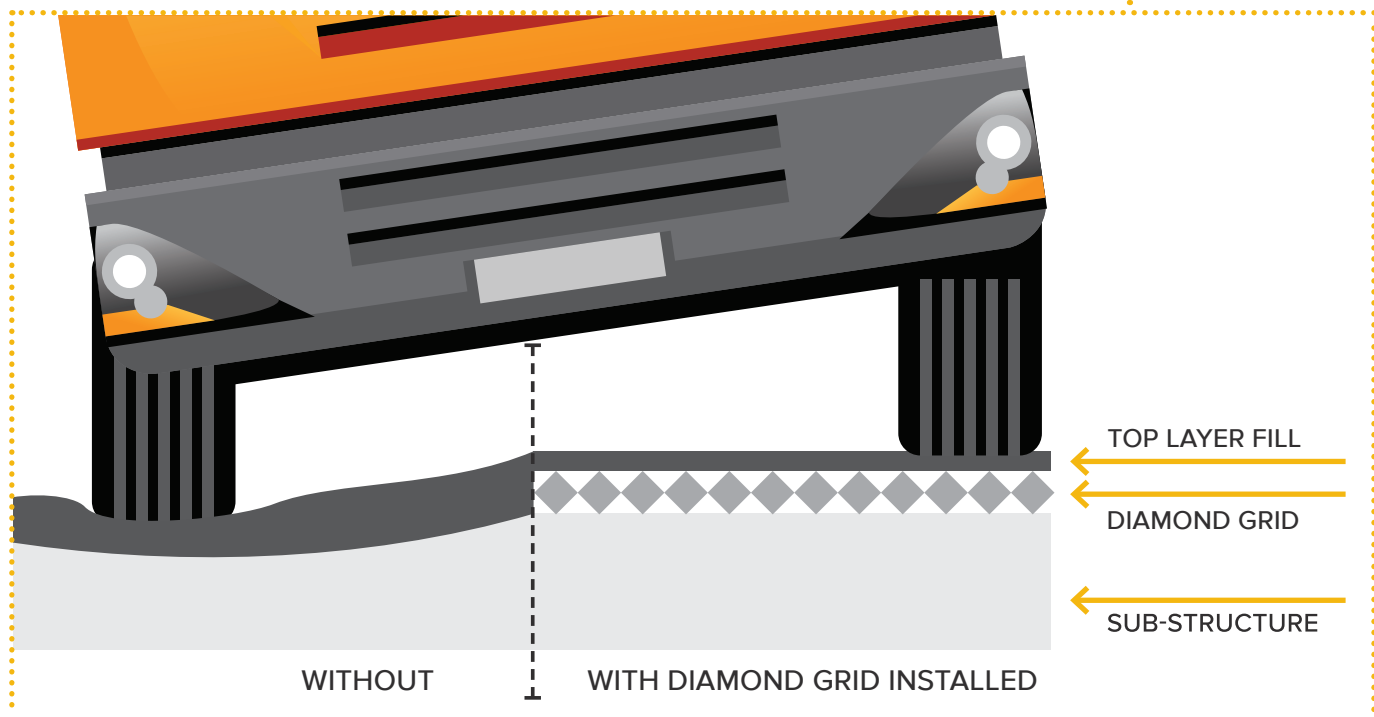
100%

RECYCLED  
POLYPROPYLENE

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# A NEW DIRECTION IN SURFACE STABILIZATION.



Diamond Grid was originally designed for use on farms for solving problems with muddy areas on their properties, everything from muddy cattle yards to muddy driveways. The solution was easy, stabilize the ground and develop a drainage system, better still, design one product that does both!

After six years in the Australian market more and more applications for the product became apparent, not only in the rural industry but also in Mining, Civil and Landscaping. Our commitment to deliver a high quality, premium product and service will remain in the future with all areas of our company performance being closely monitored by our management.

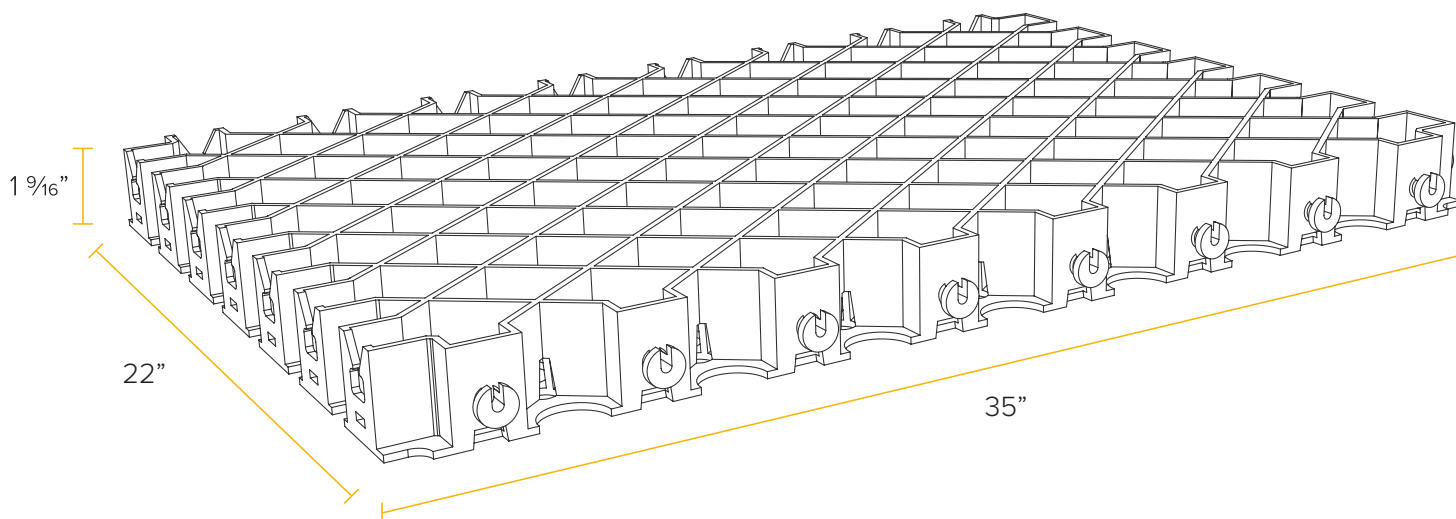
With our current client list including the three largest mining companies in Australia, leading construction companies, Government Departments, Olympic Equestrian Studs, leading racehorse trainers, some of the largest rural retail and hardware stores in Australia and the USA, we are proud to be able to receive repeat business from these clients due to the quality and demand for our product and service.



# SPECIFICATIONS.

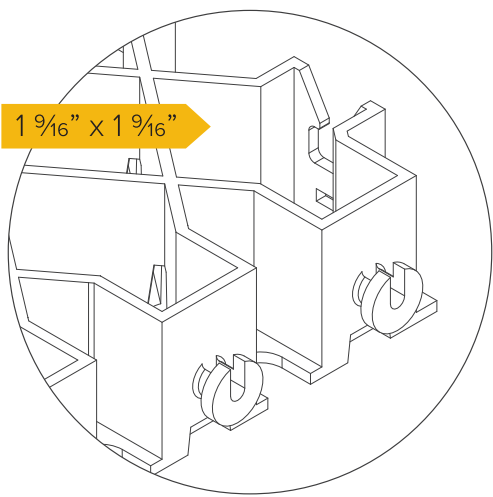
## DIAMOND GRID

35" x 22" x 1 9/16"



- | UV stabilized
- | Relocatable
- | Do-It-Yourself
- | Interlocking system

Measurements	35" W x 22" L x 1 9/16" H
Crush resistance (filled with gravel/ road base)	100+ tons/sqft filled*
Crush resistance (empty grid)	30 tons/sqft empty*
Weight per grid	7.05 lbs
Fill ratio per grid	1 cubic yard of fill per 207.9 square ft
Permeability	Up to 96%
Fill	Road base, gravel, pebbles, grass, soil, concrete, asphalt
Installation	Visit <a href="http://diamondgrid.com">diamondgrid.com</a>



The Diamond Grid interlocking system is robust and easy to install.





## In **Rural** applications, with Diamond Grid you can:

- Create cost effective access roads and eliminate mud, tire ruts and erosion
- Create horse stable flooring that is cleaner and drier, reducing maintenance costs
- Use in day yards, paddocks and wash bays to eliminate mud and erosion
- Create hard surfaces around livestock feed and water troughs
- Eliminate mud and erosion around horse walkers and horse arenas
- Lay shed flooring that is up to 60% less than the cost of concrete
- Eliminate muddy gateways and access areas
- Create hardstands in any area, on any surface
- Reinforce embankments to prevent mud and erosion
- Line drains and trenches to eliminate erosion



## In **Civil Construction and Mining** applications, with Diamond Grid you can:

- Create cost effective haul roads that are relocatable and durable with heavy loads
- Create hardstands, drill pads and wash down pads in any area, on any surface
- Lay permeable camp pathways, improve visibility from dust suppression, reduce run-off and erosion
- Prevent erosion around tailings and waste dams
- Stabilize embankments
- Create creek crossings
- Build remote airstrips on any surface
- Use in any type of civil project for road works, parking areas or hardstands



## In **Landscaping and Domestic** applications, with Diamond Grid you can:

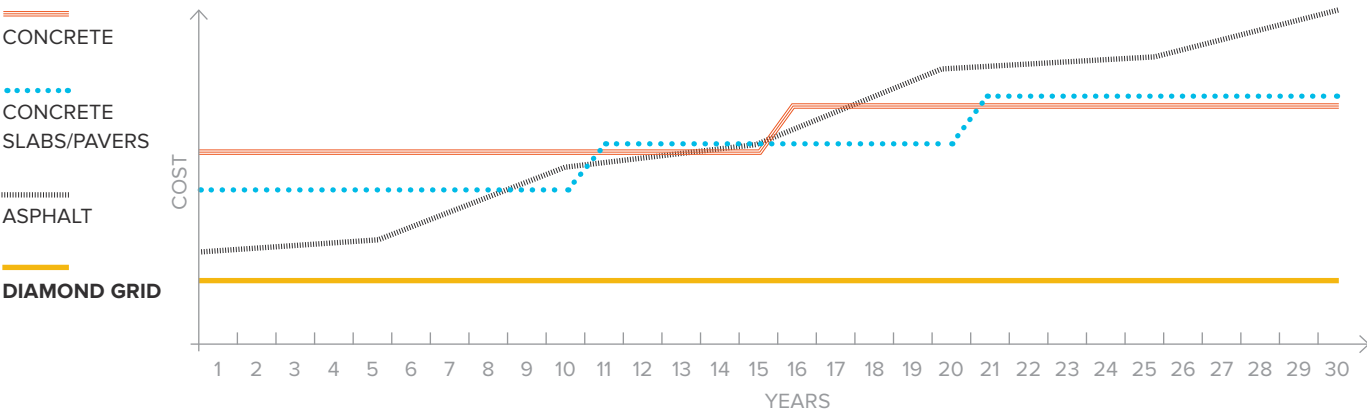
- Create natural looking pathways driveways and bike tracks
- Stabilize embankments
- Create hard surfaces for car ports
- Improve turf on Golf courses by laying golf cart tracks
- Landscape stone/gravel filled footpaths
- Provide grass & root protection to turfed areas
- Protect natural bushland by defined walking tracks
- Provide Beach and Sand Erosion Control
- Build water permeable Boat Ramps
- Create durable, cost effective shed flooring



FIGURE 1: DIAMOND GRID VS COMPARABLE SURFACE SOLUTIONS

SURFACE CONSIDERATION	CONCRETE	CONCRETE SLABS / PAVERS	ASPHALT	DIAMOND GRID
LONGEVITY	15–20 years	10–15 years	5–10 years	30+ years
MATERIALS REQUIRED	Cement and steel mesh, formwork required	Cement slabs (pre-cast)	Asphalt mixture (tar and aggregate)	100% recycled polypropylene
MAINTENANCE	<b>Low</b> – Prone to cracking and becoming unlevelled	<b>Low</b> – Can become cracked and not level	<b>High</b> – Ongoing maintenance, top seal every 2-3 years	<b>Very low</b> – May require some gravel or grass maintenance
COST & APPEARANCE	Black, uniform, industrial, high cost	Options available at a higher cost	Uniform, options available at a higher cost	Variety of fills available at low cost to blend into natural environments
PERMEABILITY	N/A	15-30%	N/A	Up to 96%
DEPTH	Varies from 3–11” depending on application	Varies from 4–6” depending on application/loads	Average of 4–4.5”	Varies from 1–2”
ECO FRIENDLINESS	High impact, not recyclable or reusable, high ground runoff, ground suffocated, can generate acid	High impact, not recyclable or reusable, requires waste dump if removed, suffocates ground	High impact if dumped/removed – uses oil based derivatives, not recyclable or reusable, high ground runoff, ground suffocated	Low impact, uses recycled materials, can be moved, re-used or replaced, up to 96% permeability, low runoff, ground maintains breathability

FIGURE 2: 30 YEAR COST COMPARISON







ROAD BASE

A diamond-shaped sample of road base material, showing a reddish-brown granular texture with a black grid pattern overlaid.

$\frac{3}{8}$ " ROCK

A diamond-shaped sample of 3/8 inch rock, showing a light-colored, irregularly shaped aggregate with a black grid pattern overlaid.

GRASS

A diamond-shaped sample of grass, showing green grass growing through a black grid pattern.

ASPHALT

A diamond-shaped sample of asphalt, showing a dark, textured surface with a black grid pattern overlaid.

CONCRETE

A diamond-shaped sample of concrete, showing a light-colored, speckled surface with a black grid pattern overlaid.

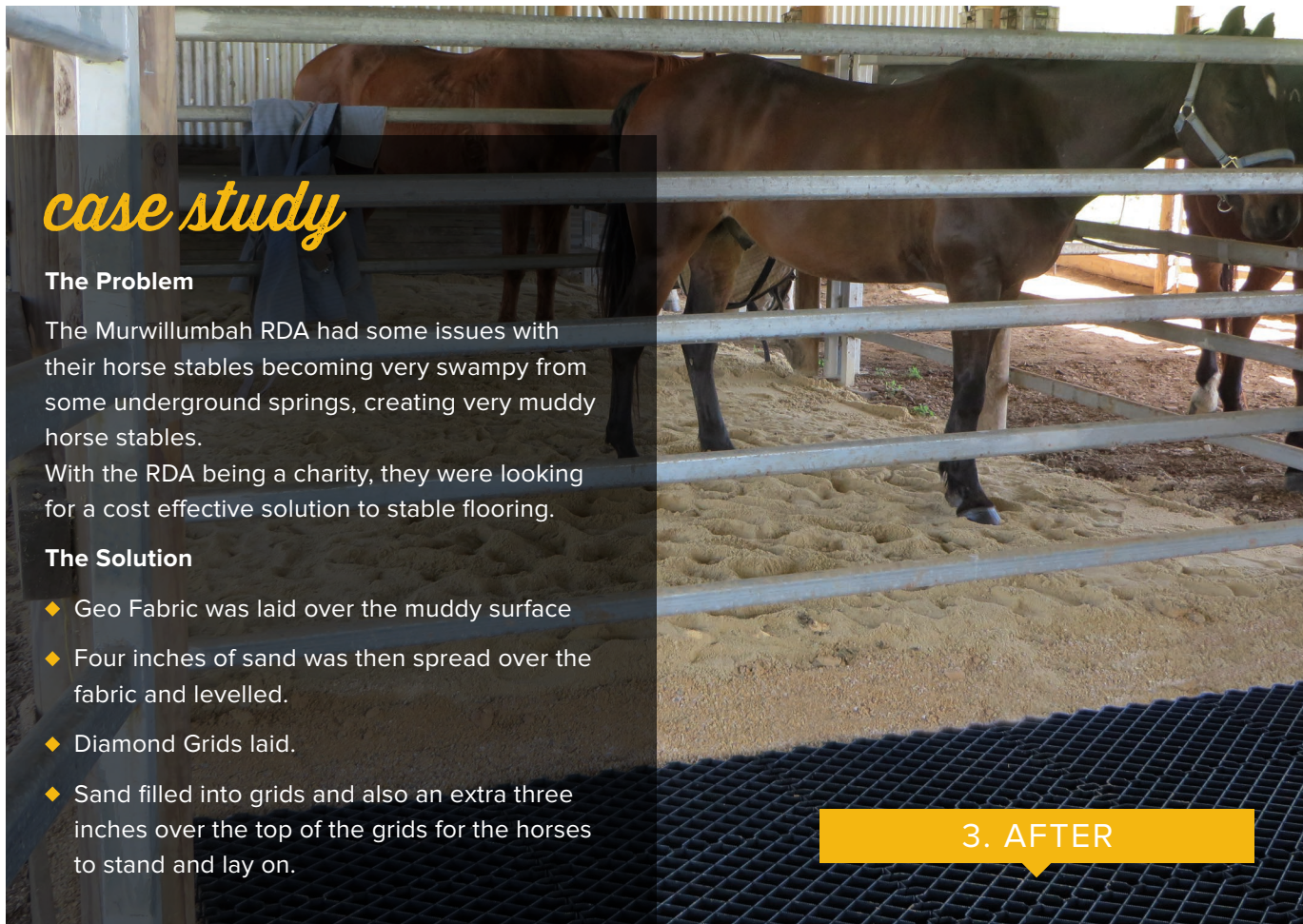
SANDSTONE

A diamond-shaped sample of sandstone, showing a light-colored, textured surface with a black grid pattern overlaid.



# HORSE STABLES

A self-draining stable flooring solution that reduces your ongoing bedding costs. The horses cannot dig holes in the flooring and the flooring cannot turn to mud.



## case study

### The Problem

The Murwillumbah RDA had some issues with their horse stables becoming very swampy from some underground springs, creating very muddy horse stables.

With the RDA being a charity, they were looking for a cost effective solution to stable flooring.

### The Solution

- ◆ Geo Fabric was laid over the muddy surface
- ◆ Four inches of sand was then spread over the fabric and levelled.
- ◆ Diamond Grids laid.
- ◆ Sand filled into grids and also an extra three inches over the top of the grids for the horses to stand and lay on.





## case study

### The Problem

Cranbourne Racecourse were looking for a cost effective solution to install flooring in their horse stables at the new multi million dollar expansion of the Cranbourne Racecourse training facilities.

### The Solution

Diamond Grid has saved the racecourse over 45% on the cost of all other alternatives. It also provides long term savings for the racehorse trainers using the stables as they will reduce their stable bedding usage by 50% or more as the urine drains through the bedding to the base under the grids, leaving the bedding dry and clean and not requiring it to be thrown out and replaced on a daily basis.



# FEED & WATER TROUGHS



The areas around water and feed troughs are always wet and muddy and Diamond Grid solves the problem by creating a well-drained solid surface for both horse and human.



## *case study*

### **The Problem**

The CSIRO were spending over \$1000 on trough pads in the past to ensure that the area on the ground outside the troughs wasn't deteriorating and making holes so the calves couldn't reach the water. This can cause calves to die of thirst. The Diamond Grids saved the CSIRO over \$300 per trough pad and they also saved up to 60% on the installation time versus concrete.

### **The Solution**

- ◆ The area was leveled
- ◆ Diamond Grids were laid over the area
- ◆ The grids were filled to the top surface of the grid with  $\frac{3}{8}$  inch Gravel.



# SHED FLOORS

Much cheaper than concrete, Diamond Grid is a perfect solution for shed flooring. The grids are ideal for storage of equipment and vehicles. Diamond Grid's easy locking system is simple to install and can be moved if you decide to re-locate your shed.



*case study*

**The Problem**

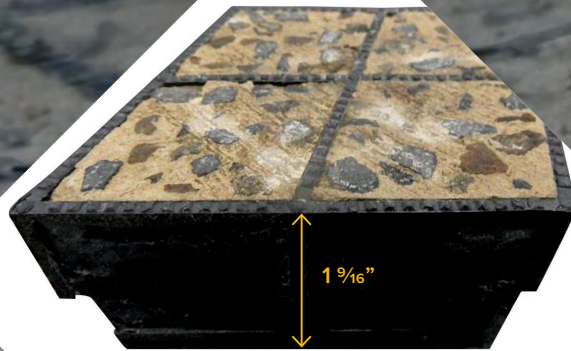
Zocar Hay Farm was having issues with their hay and other horse feed getting wet from water rising up through the ground.

**The Solution**

- ◆ Floor levelled and compacted
- ◆ Diamond Grid laid
- ◆ Filled with  $\frac{3}{8}$  inch drainage gravel
- ◆ Sprayed with asphalt emulsion to provide a solid, draining surface.



# CONCRETE REINFORCEMENT



## COMPRESSIVE STRENGTH TESTING\*

AVERAGE COMPRESSIVE  
STRENGTH OF ONLY  
4 GRID CELLS  
– 3,625 psi

SAVE UP TO

40%

ON THE COST  
OF CONCRETE



\* Testing carried out by Australian  
Laboratory Services





Concrete costs can be reduced by up to **40%** when using Diamond Grid as the reinforcement structure, as concrete depth required is only 1 ¾", considerable savings can be made on concrete requirements and labor.





# CONCRETE CAR PORTS

Concrete costs can be reduced by up to 40% when using Diamond Grid as the reinforcement structure for resurfacing your carport or driveway. A concrete depth of only 1-3/4 inches is required to achieve a certified compression strength test of 3,625 psi, providing considerable savings on concrete materials and labor.





# GOLF COURSES

Diamond Grid provides a water permeable paving solution for stabilizing grass and preventing erosion from any trafficked area. The grid systems can be seeded with grass, or filled with gravel to provide a free draining system, saving time and money on ongoing green keeping and maintenance costs.







# DIAMOND GRID VS CONCRETE AND OTHER SURFACES

Diamond Grid is an attractive alternative to concreting or comparable surface solutions, especially when the location is remote and the expense is multiplied. It is also highly durable and won't crack or wear out, even with constant use and heavy loads of over 100+ tons per square foot.

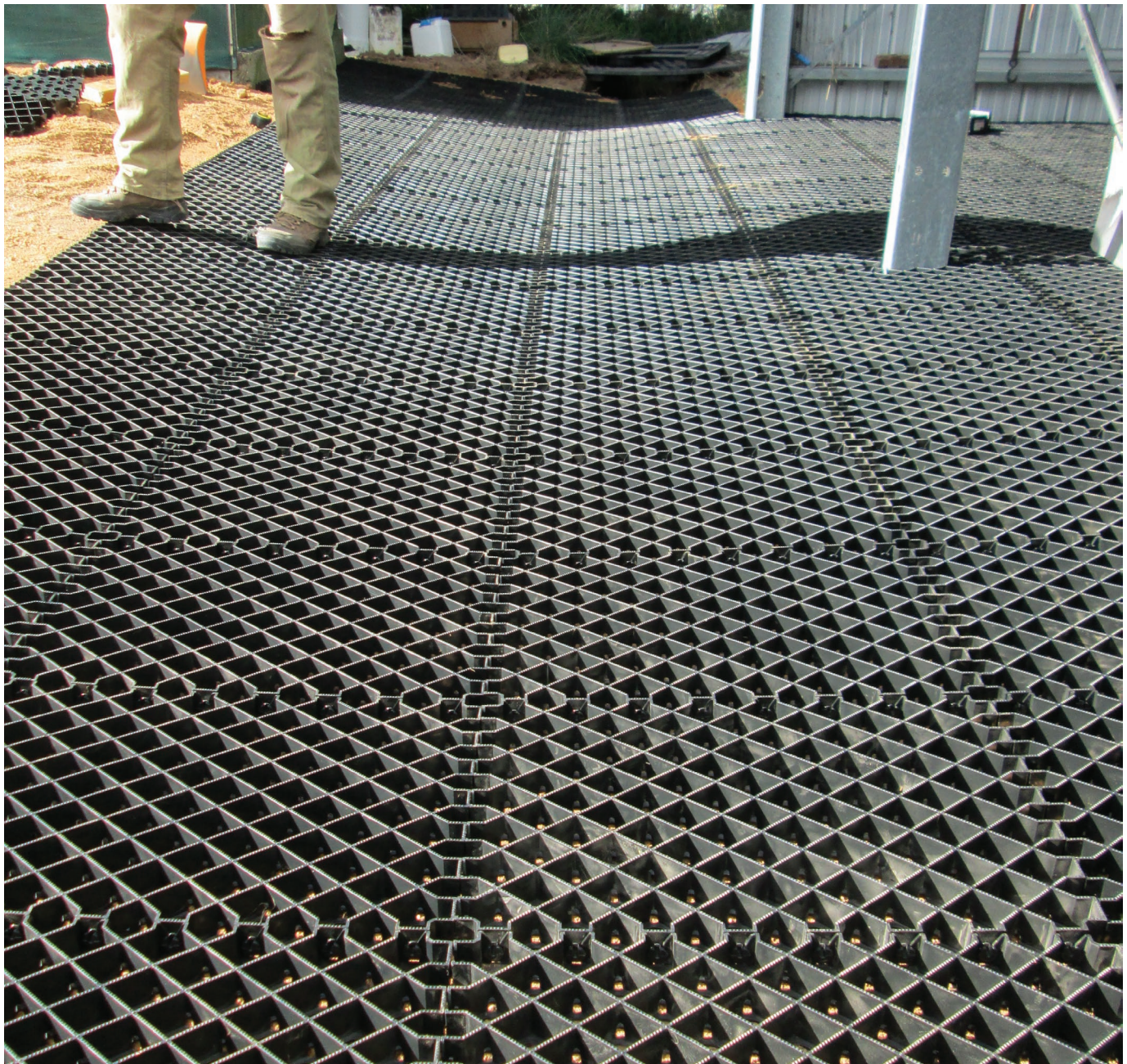
**Diamond Grid vs Concrete:** No formwork, or rebar. Diamond Grid is easy to install and comparable in strength and performance to concrete. After minimal ground preparation, Diamond Grid is simply laid, then filled with concrete to a depth less than one third of a traditional concrete pour. Less materials and labor, means you can save up to 40% on the total cost of your new surface.

**Diamond Grid vs other surface solutions:** Diamond Grid also retains full permeability when filled with gravel, asphalt or stone, a very important characteristic when drainage and run-off factors are a concern.



# DRAINS

Deep drains and trenches are protected by the grids, which support the structure of the drain and allow the water to flow through without washing away the sides of the drain. The grids are also suitable for shallow drains and trenches which are covered with grasses and small plants. The grids support the root structures while still effectively allowing the water to flow through.







# CIVIL & MINING APPLICATIONS & CASE STUDIES





## Reduce infrastructure costs and eliminate on-going maintenance expenses

Diamond Grid surface stabilization systems are successfully used by leading Mining companies throughout the world to cut costs on surfacing roads, shed floors and any other areas where a solid surface is required for all types of vehicles.

Diamond Grids also eliminate the need for on-going maintenance on unsurfaced roads that traditionally require machinery for road repairs on a regular basis.



# HAUL ROADS

Diamond Grid can be used as a top surface on haul roads to prevent pot holes, corrugation and erosion on road edges. The grids reduce downtime, and help reduce labor and machinery costs compared to using concrete. They also reduce the costs of running a grader to repair roads.





# EXCAVATOR YARD

“WE RECENTLY INSTALLED DIAMOND GRID AND HAVE FOUND THAT EVEN WITH MACHINERY EXCEEDING 55 TONS, TRACKING AND TURNING HAS NOT AFFECTED THE DURABILITY OR RELIABILITY OF THIS PRODUCT. MORE IMPORTANTLY – NO MUD PIT.”

**LOADEX** HIRE



## *case study*

### **The Problem**

Loadex have anywhere up to 30 Excavators, Graders, Rollers and other heavy machinery in their hire yard at any one time, weighing up to 55 tons. They required a surface that would stop the machines ripping the ground up and creating an uneven, muddy surface.

### **The Solution**

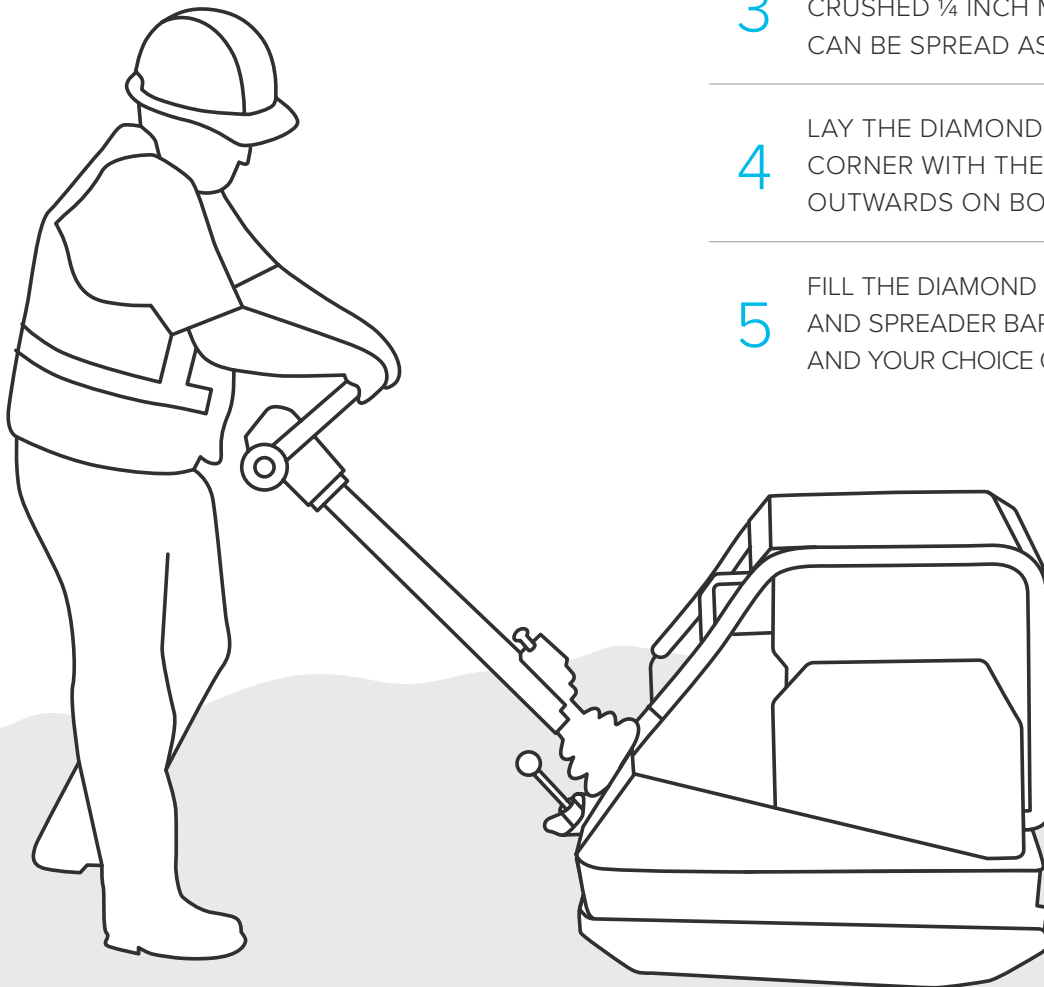
- ◆ The area was leveled and compacted
- ◆ Diamond Grids were laid over the area
- ◆ Road Base was spread into the grids with a bobcat
- ◆ Road base was then compacted with a vibrating plate
- ◆ A ½ inch road base surface was laid over the top of the grids for the Excavators to pivot on.



# BASIC INSTALL GUIDE

## MINIMAL BASE PREPARATION

- 1 USING A GRADER OR A BOBCAT AND SPREADER BAR, LEVEL THE SITE IN READINESS TO LAY YOUR DIAMOND GRID.
- 2 LAY GEO FABRIC OVER THE LEVELED AREA.
- 3 IF THE SITE IS STILL UNEVEN,  $\frac{1}{2}$  INCH OF CRUSHED  $\frac{1}{4}$  INCH MINUS ROCK AND FINES CAN BE SPREAD AS A BASE.
- 4 LAY THE DIAMOND GRIDS STARTING IN ONE CORNER WITH THE MALE LUGS FACING OUTWARDS ON BOTH MALE SIDES.
- 5 FILL THE DIAMOND GRID WITH A BOBCAT AND SPREADER BAR OR SOMETHING SIMILAR AND YOUR CHOICE OF MATERIAL\*.





## MEDIUM BASE PREPARATION

- 1 USING A GRADER OR A BOBCAT AND SPREADER BAR, LEVEL THE SITE IN READINESS TO LAY YOUR DIAMOND GRID.
- 2 LAY GEO FABRIC OVER THE AREA WHERE THE GRIDS ARE GOING TO BE LAID. COVER THE GEO FABRIC WITH ROAD BASE WITH ROLLER OR VIBRATING PLATE.
- 3 COMPACT ROAD BASE WITH ROLLER OR VIBRATING PLATE.
- 4 IF THE SITE IS STILL UNEVEN, ½ INCH OF CRUSHED ¾ INCH MINUS ROCK AND FINES CAN BE SPREAD AS A BASE.
- 5 LAY THE DIAMOND GRIDS STARTING IN ONE CORNER WITH THE MALE LUGS FACING OUTWARDS ON BOTH MALE SIDES.
- 6 FILL THE DIAMOND GRID WITH A BOBCAT AND SPREADER BAR OR SOMETHING SIMILAR WITH YOUR CHOICE OF MATERIAL\*.

## EXCAVATION & MAJOR BASE PREPARATION

- 1 EXCAVATE SITE TO A DEPTH OF 8 - 14 INCHES DEPENDING ON THE CONSISTENCY OF THE SUB GRADE.
- 2 LAY GEO FABRIC OVER THE AREA WHERE THE GRIDS ARE GOING TO BE LAID.
- 3 COVER THE GEO FABRIC WITH ROAD BASE AND COMPACT TO A LEVEL 1 ½ INCHES BELOW FINISH HEIGHT.
- 4 COMPACT ROAD BASE WITH ROLLER OR VIBRATING PLATE.
- 5 USING A GRADER OR A BOBCAT AND SPREADER BAR, LEVEL THE SITE IN READINESS TO LAY YOUR DIAMOND GRID.
- 6 IF THE SITE IS STILL UNEVEN, ½ INCH OF CRUSHED ¾ INCH MINUS ROCK AND FINES CAN BE SPREAD AS A BASE.
- 7 LAY THE DIAMOND GRIDS STARTING IN ONE CORNER WITH THE MALE LUGS FACING OUTWARDS ON BOTH MALE SIDES.
- 8 FILL THE DIAMOND GRID WITH A BOBCAT AND SPREADER BAR OR SOMETHING SIMILAR AND YOUR CHOICE OF MATERIAL\*.



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DIAMONDGRID™

**diamondgrid.com**



Quality  
ISO 9001  
SAI GLOBAL

Manufactured in ISO 9001:2008 Certified Manufacturing Plants. \*Patent pending.