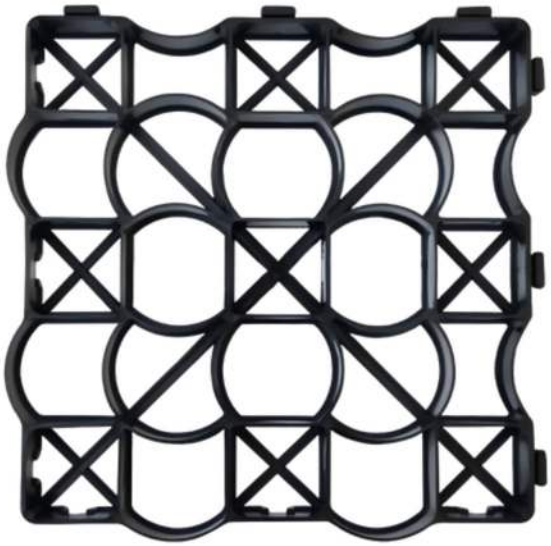
Ground Grid

PRODUCT PROFILE

Ground Grid is a modular PP cellular paving system designed to stabilise gravel or grass surfaces while ensuring effective water infiltration. Interlocking panels (typically 500 × 500 × 38/50 mm and 330 × 330 × 50 mm) form a rigid, load-spreading layer that prevents rutting, protects root zones, and allows stormwater to infiltrate instead of running off.



BENEFITS & FEATURES

- **Permeable reinforced surface**
  Open-cell structure keeps surfaces firm while allowing rainwater to infiltrate, reducing runoff and surface ponding.
- **Excellent load distribution**
  Cellular lattice spreads wheel loads over a wide area, limiting rutting and potholes on gravel or grass access routes.
- **Modular, interlocking panels**
  500 × 500 mm panels connect quickly with built-in clips or buckles, forming a continuous mat that resists lateral movement.
- **Multiple depths for different loads**
  38 mm and 50 mm grid heights provide options for footpaths, car parks or heavier occasional traffic when correctly designed.
- **Flexible infill options**
  Compatible with gravel, crushed stone or grass / turf infill, enabling both hard-wearing and green aesthetic surfaces.
- **Reduced construction depth**
  Ground Grid reinforcement can reduce the required thickness of imported sub-base when compared with unreinforced build-ups.
- **Durable recycled PP material**
  Manufactured from high-strength polypropylene, resistant to frost, de-icing salts and common hydrocarbons for long service life.
- **Lightweight and stackable**
  Low panel weight and compact nesting minimise transport cost and make manual handling and site logistics much easier.

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Ground Grid – SPECIFICATION & TECHNICAL DATA SHEET

Model	Panel size (mm)	Panel size (inch)	Nominal height (mm)	Nominal height (inch)	Approx. weight / panel	Approx. plan area / panel
ARW-GG33	330 × 330	13.0" × 13.0"	50	2.0"	~0.6 kg	~0.11 m^2
ARW-GG38	500 × 500	19.7" × 19.7"	38	1.5"	~1.5 kg	~0.25 m^2
ARW-GG50	500 × 500	19.7" × 19.7"	50	2.0"	~2.0 kg	~0.25 m^2

Item	Specification
Material	High-density polyethylene (HDPE)
Standard colour	Black，Other colours available on request (e.g. green, grey, custom tones)
Panel connection	Integral interlocking edges / buckles forming a continuous mat
Recommended infill	Angular gravel / crushed stone (e.g. 4–20 mm) or engineered soil / sand rootzone for grass
Load capacity (ARW-GG38 / GG50)	**200 t/m^2 (≈ 1,960 kN/m^2, ≈ 285 psi) ≈ 50 t per 500 × 500 mm panel**
Load capacity – filled with gravel (ARW-GG38 / GG50)	**≥ 500 t/m^2 (≈ 710 psi) – with compacted gravel infill**
Sub-base & geotextile	Compacted granular sub-base designed to traffic load & subgrade CBR; separation geotextile where required
Typical applications & surfaces	Gravel or grass car parks, residential driveways, fire & emergency access, farm and field tracks, paddocks, riding arenas, equestrian walkways, livestock yards, machinery standing areas, golf buggy paths, verges, slopes and tree root protection zones
Installation method	Panels laid on prepared sub-base, interlocked, filled and compacted; edge restraint recommended at open boundaries

Design & Installation Notes:

Actual allowable loads for Ground Grid must be determined by a qualified engineer based on subgrade strength, sub-base thickness, infill type, edge restraint, traffic category and local codes. The information in this sheet is indicative and does not replace a project-specific pavement design. ARW reserves the right to change product design and specifications without prior notice.

Ground Grid – Typical Applications

High-strength, permeable reinforcement for heavy vehicles, rural access, livestock areas and equestrian facilities.

ARW Ground Grid creates stable, free-draining surfaces in many different environments. The HDPE cellular structure spreads loads, prevents rutting and keeps gravel or soil in place while allowing rainwater to infiltrate naturally, helping to manage stormwater and reduce surface flooding.From heavy vehicle yards to paddocks and riding arenas, Ground Grid helps keep outdoor surfaces usable in all weather conditions.

Heavy Vehicles & Parking

Heavy vehicle yards and permeable parking
ARW Ground Grid provides a robust, permeable surface for heavy vehicles such as lift platforms, service trucks and fire engines. Installed over a properly engineered sub-base and filled with compacted gravel, the grid delivers very high load-bearing capacity while maintaining infiltration. It is ideal for equipment yards, depot parking, emergency standing areas and access routes where both structural performance and surface drainage are critical.

Heavy-duty equipment standing area reinforced with ARW Ground Grid.

Rural Driveways & Farm Tracks

Rural driveways, slopes and farm access tracks
On steep or seasonally wet ground, unreinforced gravel tracks can wash out, rut and become difficult to drive on. Ground Grid locks the aggregate in place, creating a stable, free-draining driveway or farm track that resists wheel spin and erosion. The interlocking panels follow natural contours and can be cut around fences, trees and rocks, making them ideal for long access routes in hilly terrain.

Slope access track stabilised with ARW Ground Grid to prevent erosion and improve traction.

Application note:
The applications shown are indicative only. Final pavement build-ups, sub-base thicknesses, infill types, and allowable loads for ARW Ground Grid must be designed and verified by a qualified engineer based on ground conditions, traffic requirements, and local regulations.

Ground Grid – Typical Applications

High-strength, permeable reinforcement for heavy vehicles, rural access, livestock areas and equestrian facilities.

Livestock Yards & Pens

Livestock yards, holding pens and barn fronts
Around gates, feeders and barn entrances, hoof traffic quickly churns soil into deep mud. ARW Ground Grid stabilises these high-traffic zones, providing a clean, free-draining surface that is comfortable for animals and safer for staff. The grid confines gravel or a suitable soil mix, reducing mud, standing water and manure-laden runoff, helping to keep hooves healthier and improving hygiene in wet seasons.

Livestock holding area reinforced with ARW Ground Grid, improving drainage and reducing mud during wet seasons.

Equestrian Arenas & Paddocks

Equestrian arenas, paddocks and turnout areas
ARW Ground Grid is an excellent base for riding arenas, lunge pens and exercise paddocks. The cellular layer forms a stiff, well-drained platform beneath the sand or fibre footing, preventing the sub-base from pumping and helping to maintain an even riding surface. In turnout and holding areas, the grid reduces poaching and mud, providing better underhoof support and extending the usable season for outdoor riding.

Horses standing on an ARW Ground Grid reinforced paddock with improved drainage and stability.

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