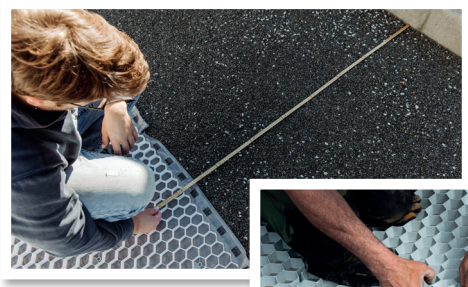
REINFORCING BEST PRACTICES *with ground reinforcement tiles*

The performance of ground reinforcement tiles on the surface depends on supporting layers beneath. Angus Crichton, ACO House & Garden's marketing manager, spoke to landscaping expert Rupert Keys from TASK Academy (left) about installation best practice



Angus: Why are ground reinforcement tiles valuable products for landscapers?

Rupert: The fundamental fact is that gravel in a grid doesn't move around on top of a hardcore system like loose gravel would, especially on a driveway with cars turning. In a parking area, grass within a grid doesn't churn up. The grid keeps everything in place.

Angus: Starting from the bottom up, how do site conditions shape installation?

Rupert: First, test the ground that you're going to be excavating out because you don't know how solid that ground is, and not just on the surface. This can have an impact on the depth of the sub-base required. A trial pit or a core sample will reveal if the sandy soil on the surface turns to clay 300mm down.

> "Choose a grid that is the right strength for what travels over it"

Sending a soil sample to the lab for a California Bearing Ratio Test reveals the compaction properties of soil. You can then adapt the depth of sub-base in accordance with the soil conditions below, as well as allowing for the weight of traffic above. It's always useful to get a structural engineer involved. Plus, choose a grid that is the right strength for what travels over it.

Angus: What are your key rules for building a secure sub-base? Rupert:

- **Rule 1: Free-draining layers.** To stabilise the soil and ensure permeability to the surface water above, put down MOT Type 3. This open-graded sub-base material has reduced fines, which increases its permeability, yet compacts tightly for load bearing.
- **Rule 2: Separate the layers.** Sandwich the MOT Type 3 between two layers of geotextile membrane. The geotextile stops soil coming up into the sub-base and stone moving down into the soil. Without a membrane, you'll get insects and worms bringing up soil into MOT Type 3 and clogging up its permeable spaces, and stone travelling down, causing sinking.
- **Rule 3: Lay and compact layers in stages.** Sub-bases should be compacted in layers of no more than 75mm in depth at a time. You don't want to be compacting 200mm of sub-base all in one go because the compaction is not getting down to the bottom. It's just going to sink when trafficked.

Angus: How do we lay the tiles onto the sub-base?

Rupert: Your finished MOT Type 3 might be undulating, so I have used a thin blinding of sharp sand (or more free-draining grano dust) over the top of the MOT just to take out any dips or hollows. Having compacted this laying course, the grids go down on top of that in a stretcher pattern, breaking up joints between rows like with brickwork. This is all after we've laid some edgings. These retain the gravel, hold everything in place and stop spread, particularly when a vehicle turns. You could use nice block paving, concrete curbs, or solid metal edging. If grids are installed on a slope, pin them into the ground.

Angus: And how would we finish off with gravel or grass?

Rupert: You would lay something between 10-14mm gravel. You don't want anything too big as you want that gravel to sit in the honeycomb effect of the grid system. For grass, add and level off soil into the grids and then sow. Make sure it's good quality topsoil, without any compost, firmed down but not over-compacted, so the roots bind all that soil together. If it is dry, water the grass.

Angus: How can landscapers gain more knowledge of these and other products?

Rupert: The main reason I started TASK Academy is to give my years of experience to people walking through our door as students. 80% of a TASK course is practical. We're outside, hands-on; it's the best way to learn.

aco.co.uk/ground-reinforcement
taskacademy.co.uk