



# Ecological grounds

Whilst natural materials soften the environmental and visual impact of a development, a truly ecological approach goes much further

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The underlying principle of the Ritter system is the very simple cellular structure of the honeycomb - one of the strongest structures occurring in nature.

Below  
Equiterr installation, Malaga, Spain.



Ecological thinking is becoming the mainstay of many development and building projects. Based in east Algarve, Paisotec Lda. offers a unique system for exterior hard surfaces that harmonises landscape architecture with nature.

For property developers, builders, planning authorities and property buyers, ecological construction is becoming established practice. Many building materials are chosen so they don't pollute the environment, come from sustainable sources, and are recyclable. But few people consider the external surfaces that enclose almost every structure we build - roads, footpaths and car parks. Concrete and asphalt are the 'hard landscaping' reality that has become the accepted norm surrounding us.

Whilst natural materials soften the

environmental and visual impact of a development, a truly ecological approach goes much further. Ritter Honeycomb is a paving framework system made from re-cycled plastics, offering an alternative way of surfacing roads, driveways and car parks. Filled with natural materials such as gravel or topsoil with grass, the system provides a viable alternative that fulfills most functions of conventional external surfaces.

Gravel or grass is certainly preferable to concrete. Used in conjunction with the Ritter system, these advantages are taken further, as its free-draining qualities replicate natural drainage conditions. Also, being used in conjunction with gravel or grass offers lower temperatures from absorbed or reflected solar heat, helping to create a more agreeable micro-environment than any tiled or

concreted patio or an asphalt driveway.

Made of high-density polyethylene from re-cycled material, Ritter honeycombs are stabilised against the sun's UV radiation and last indefinitely. This also means they are re-usable: a typical installation can be removed along with its stone sub-base and re-installed - and there are no by-products.

Each Ritter honeycomb section is made from a network of hexagons that interlock with the adjoining section. Once filled with soil or gravel they virtually disappear from sight. Ritter honeycomb can take up to 100 tons per square metre if correctly installed, so it can be used as hard-standing for most heavy vehicles.

For gravel or loose stone surfaces, the honeycomb cells maintain the integrity of the upper surface when in contact with tyres, thus allowing for frequent traffic movements without dislodging the stones, creating an attractive gravel driveway without the constant need for raking or annual topping-up with more gravel. Honeycombs provide a good pavement for wheelchairs, prams, chairs and tables - normally beyond the capability of a traditional gravel surface.

But Ritter's true 'green credentials' are as a reinforced grass surface, as the 5cm-deep sections offer the turf protection against any load applied onto it. The sections are installed on a sub-base that allows root growth for the grass, with each honeycomb cell designed with holes to allow plant roots, water and nutrients to pass freely between. In this way, the plant roots lock each section down, so that on a good lawn it's almost impossible to remove them without crowbars!

A clever patent has prevented other manufacturers from replicating Ritter's design, thus making it a unique product. Nowadays, in many parts of Europe, it is being used to create pleasant lawns around industrial buildings, yet still allowing heavy vehicles such as fire engines to drive over the grass in an emergency without sinking or causing surface damage. In private houses and

offices, a grass-filled Ritter system is frequently used to reinforce lawns and provide occasional parking for guests. It's even been used for mansion lawns to disguise a helicopter landing-pad - and park a private jet!

Throughout the Algarve, Ritter Honeycombs are in successful use for car parks, golf buggy tracks, driveways and platform foundations for timber buildings. Under the name Equiterr, they are also used to reinforce and provide drainage for equestrian arenas.

On larger projects its usage satisfies the need for ecological and aesthetic design criteria set by developers and planning authorities. Paisotec's first major installation - one of the largest ever undertaken in Europe - was for the car parks and 15kms of buggy paths on the Quinta da Ria and Quinta da Cima golf courses in eastern Algarve. These courses fall within the Ria Formosa National Park, where an ecological approach to development encourages the conservation of natural surfaces which allow rainwater infiltration to continue. Being almost totally water-permeable, Ritter Honeycombs fulfill this role perfectly.

Aesthetics were of equal consideration too, so using the Ritter system for grass buggy tracks didn't detract from the courses' natural and man-made beauty. As more than 90% of the honeycomb surface is filled with material, less than 10% of its surface is visible on installation - and in time it all but disappears.

At the other end of the Algarve, at the Alma Verde Village and Spa near Lagos, Ritter honeycombs are now being installed for gravel driveways, to further enhance the excellent ecological design principles of this acclaimed award-winning housing development.

Whether grass-filled on a golf course, gravel-filled as a car park, or sand-filled on a beach, the Ritter honeycomb system retains the appearance and water-permeability of any natural surface - harmonising architecture with the natural environment. ■



This photo and two above  
Quinta da Ria Golf Course near Tavira



## Further information

Paisotec Lda are sole agents for Ritter in the Algarve. For further information call Benedict Hurst

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