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CROWN 111 used to prevent turf wear in severe situations

Crown III is an innovative and competitive way to reinforce turf. It comprises rubber granules of controlled mesh sizes, that are worked into the to the turf to turn the top few inches into a cushion. Once present at the prescribed level, it gives:-

- **Improved grass wear**
- **Permanent improvement in surface drainage**
- **Reduced compaction**
- **Reduction in surface hardness**
- **Improvement in stability and less cut up**
- **Less tendencies for the area to freeze.**

Two soil scientist, working in the Agronomy department of Michigan State University in America, made the discovery, of the ability of rubber crumb of the correct particle size, to confer certain advantage onto sports and heavy user turf. It was considered to be an advance of sufficient merit, to warrant the granting of a patent in April 1997. The European Patent was granted in April 2002 and we are the licensees, for England, Scotland, Wales and Ireland under the European Patent number is EP0788301 B1. Crown III is the licensed product.

What are considered to be severe wear situations on grass – Rugby pitches, Event Areas, Car Parks, Vehicle roadways, Polo grounds, landing areas on a racecourses, Children's Play areas.

There are two grades of Crown III used for severe wear situations; 1-3mm, 12-14mm an example is given in each case.

In these severe situations we would recommend the largest particle size that is practical for the particular activity. For Vehicles or Horses of any sort the 12-14mm grade is used, for human foot traffic on slopes, and for Rugby the 1-3mm.

Some practical examples are given below:-

1-3mm. ***Brian Walker the Head Grounds man of Cardiff Rugby Club*** **treated the whole pitch at Cardiff Arms Park with two dressing of 1-3mm Crown III, totalling 5 kilos per sq metre in March/April 2002. He reports in January 2003, " The pitch is drier and more stable than it has ever been, in spite of the heavy rain we have had so far this winter. I am particularly impressed with the reduction in the surface damage during the game." Brian applied the Crown III after using a 20mm core verti-drain to 5-6inches depths, by drag mat, in one applications and he allowed two months for root development.**

1-3mm ***Sizergh Castle Kendal***

This National Trust garden has one particular problem area situated up a ramp 40 degrees with only 5 inches of soil on cobbles. This lead to the information office so was heavily used. 6-8 kilos/ sq.m of Crown III 1-3 mm were mixed into the surface 3 inches and over seeded with dwarf rye. The following year a further 4 kilo/sq/m was applied by hollow tinning. The results have been very good; it has been perfect all summer.

2-10 mm ***Maurice Crooks Head Grounds man Haydock Racecourse***

This grade has now been superseded by a combination of 1-3 plus 12-14mm on the surface

He tried Crown III on the 10m x 14m landing area of one jump. Three dressing were applied, the first was brushed into 6 inch deep hollow cores in June 99. The next two dressings were top dressed as soon as the previous one had disappeared, this took about two weeks. The landing area is described as having much improved surface grip. It was also used in an open ditch in front of a fence for cosmetic purposes. He reports reduced slippage on the landing area where they used 10 kilos/sq/m of the 2-6mm grade. In 2000 he increased the particle size of the material and used to 2-10mm, the results were even better. He has continued the work in 2001 and is now treating three more landing areas with the coarser material. The cost is approximately £70 per landing area. In 2003 he is considering the coarser 12-14mm grade

12-14mm. ***Stow Gardens overflow Car Park*** **In 2003 the Head Gardener decided they had to some reinforcement work on the 15000 sq m of the grass Car Park which in certain areas was becoming muddy and rutted. He had only a small amount money due to the difficult within the National Trust at that time so he decided to treat the worst areas with Crown III. The ground was tined and 4 kilos/persq/m laid on the surface and then brushed into the tine hole until about 900 sq/m had been covered. This was reseeded and protected until a good head of grass developed. It is now into its third season and is standing up well. A further area will be completed in 2007, by using the 1-3mm to improve the drainage, by filling the tine holes and 12-14mm on the surface to provide resistance to penetration.**

12-14mm. ***National Trust Isle of Wight*** **in 2006 the management of the coast car park areas decided to try on the Crown III system using the larger particle material on the surface. The process was to verti drain the area then add 6 kilos per sq.m. to the surface brush in to the holes where possible leaving the large particles and associates fibre on the surface. After two weeks the grass had grow through and the rubber had disappeared from view. After six months it was reported to be working well**

Other recent examples have been the Paddington Gardens ,St John Wood gardens in London along with the Tower Memorial Site. The area in front of the Millwall training pavilion was treated with the combination of 1-3mm in the verti drain holes, to improve the drainage and 12-14mm on the surface. So far this has worked.