



Work underway on the synthetic turf hockey field at Curro Hazeldean School in Pretoria



Strata Civils streamlines synthetic turf design to provide cost effective solutions without compromising on quality.



Strata Civils pays particular attention to the tolerances on the final surface of the turf, which is critical to the quality of the final playing surface

SYNTHETIC TURF HOCKEY FIELD AT CURRO HAZELDEAN

Curro Hazeldean Independent School is situated in Silver Lakes, Pretoria. It is a parallel-medium school (English and Afrikaans) offering private education at primary and high school level. A synthetic turf hockey field was recently installed there by Strata Civils in conjunction with Synsports.

Andre Retief, contracts manager for Strata Civils, explains that the initial plan had been to place the field where a traditional hockey field had been, but it was discovered that the area had previously been a refilled quarry and that too much settlement of the fill material was still taking place; it was therefore decided to locate the new field lower down on one of the rugby fields and closer to the school building.

Ground preparation

The natural grass from the former field was removed, as was a 200mm layer of topsoil. Bulk earthworks comprised cut and fill operations, with bulldozers cutting material from the south end of the field and filling the northern end. The site was then graded to the correct level, smoothed and rolled to achieve compaction and specific tolerances. It was essential to ensure that no settlement occurred.

The next step was to import a G5 sub-base (hardening layer), grade once again to the correct levels and compact. After the flatness of the field had been ascertained, the curb lines were installed. To obtain maximum ground smoothness, a 10mm thick slurry layer (bitumen-based) was put down; this helps to ensure that levels are precise. "The slurry takes a while to set but once this and screeding has taken place, a three ton roller irons out creases and compacts the slurry," says Retief. Charles Linnegar, MD of Strata Civils, says that ground preparation needs to ensure that water can move through the turf, but not into the groundworks. A flood test is carried out, whereby the field is flooded with water to check for puddling and to show where dips and valleys may still be present on the surface. Retief explains that the field is designed like a road or parking area, with a point six percent fall around it. This collects water and drains it away into catch pits; from here it moves into the municipal water system.

Where dips are found on the field, chalk lines are drawn around them and they are filled with sand and thereafter a thin layer of sand slurry. Retief says that whereas the main slurry layer is coarse, the sand slurry is much finer and acts like a thin coating to smooth out the field. The turf is only installed once all the dips and peaks have been levelled out and the surface is

completely even. Linnegar says the tolerances on the final surface of the turf are critical to the quality of the playing surface.

Paving around the field was also installed by Strata Civils.

Synthetic turf installation

The supply and installation of the synthetic turf and shock pad system, as well as the mobile goal posts, was undertaken by Mike Merryweather of Synsports. A Greenfields ND20 sand-dressed system was installed, which Merryweather says is a top end sand-dressed solution for hockey. "Greenfields is the recent supplier to the Hockey World Cup, producing synthetic turf solutions together with yarn producer TenCate," he says.

The installation was a combination of manual labour and the use of specialised machines. The turf rolls are 55m x 4m and each one weighs half a ton. They are offloaded onto the site with a TLB and placed in the correct positions with line markings in place. The rolls are joined together by means of seaming the material with a specialised joining tape and polyurethane binder. The entire length of the field is laid out first, followed by installation of the sidelines. Once this is complete, specialised machines are used to cut in the specific circles and additional line markings required for hockey. The sand fill layer is then installed with a loading machine and SMG sandmatic machine. This ensures that the 80 tons of sand infill is placed consistently around the field.

Merryweather explains: "In a nutshell, we receive about 28 full rolls and turn this into one giant mat/hockey field by seaming all the materials together. All the sidelines and goal lines are made in the turf and the circles are then cut in. The sand is then installed and the perimeter edge of the turf is clamped and secured".

Maintenance

Although the synthetic turf is maintenance free for the first year, thereafter the "carpet" pile needs to be lifted so that the sand originally brushed in can be re-spread. Retief explains: "The sand moves around constantly depending on the area of play, and a tractor with brushes is used to lift the pile and re-spread the sand evenly around the field".

Merryweather says that maintenance also involves keeping the surface clean and hygienic, and this can be done by a variety of sweeping/cleaning machines.

Strict rules apply to players, who are required to use special boot cleaning brushes to prevent dirt from being brought onto the field. Airborne seeds can also migrate onto the field and cause damage.

To date, Strata Civils has built 18 synthetic turf hockey and soccer fields throughout South Africa. The general lifespan of a field is seven years. **isa**