

Hard-Surface Pumptracks

BY EREZ LOTAN

In our view, the design and construction of pumptracks and bike parks should be approached in the same way as any other public facility. They should be built to professional standards, comply with all specifications regarding public safety, and take into account durability and long-term maintenance alongside the fun-factor.

One answer we found, with regard to maintenance issues, is to apply a surfacing material that can withstand wet weather and the wear and tear of constant bike use, without the need for nonstop repairs and rebuilds. The base layers of the pumptrack, which provide its particular shape and slopes, are made of compressed quarry aggregate layers, designed according to professional road engineering standards and taking into account the local ground type and topographic conditions.

After many trials, we arrived at a solution for the top surface layer, which consists of a small-grade asphalt base layer strengthened by a special fiber mat that holds the asphalt on the steep, sloped sides of berms. This special asphalt layer, after being firmly and thoroughly compressed on all slopes and at all angles, is then covered with several coating layers. We use a base layer for closing the aggregate pores and smoothing the surface, then add several waterborne, epoxy-modified acrylic top layers that have been colored. The end surface should have a high level of

traction so a rider's wheels will not slide, while maintaining a low rolling resistance to provide a smooth, fast, and safe track for all levels of users.

Consider that shaping a pumptrack like this is a very detailed and intricate job as the geometry of the track is quite complex, and will be extremely difficult to alter once laid down. The rollers and berms should be thoughtfully connected with flowing lines and transitions. Additionally, a great deal of thought must go into exact ground elevations and water drainage planning and details. The track shape has to be very accurate and conform to the specific and intricate details of the design. Special care is needed in forming the small but important transition zones between the different shapes of rollers and berms. A highway contractor will probably not have the knowledge, dedication, or experience to properly execute a small pumptrack, so someone with a great deal of riding experience should be involved in the formation to ensure proper design functionality and flow.

Architect Erez Lotan of Lotan Architecture and Landscaping Ltd., and Construction Expert Boaz Goren, of Mountain Goat LLC contributed to this essay.



BEFORE



AFTER