

LIGHTWEIGHT STRUCTURAL FILL

Killarney Park Soccer Field

A natural grass field built over compressible ground, without the weight.

LOCATION

Vancouver, BC

APPLICATION

Soccer field fill

DESIGN

Van der Zalm + Assoc.

MATERIAL

Enviro-Rock FGA

OVERVIEW

The Killarney Park training site in Vancouver needed a new natural grass soccer field built over compressible ground. Van der Zalm + Associates specified a lightweight fill to raise the field to grade without overloading the soils below, and Enviro-Rock foam glass aggregate was supplied for the job in place of the originally specified pumice. Around 11,000 cubic metres went in beneath the field, giving it a stable, free-draining foundation made from 100% recycled glass.

THE CHALLENGES

Building a full-size natural grass field to grade over compressible ground meant adding a significant depth of fill. A conventional granular fill of that thickness would have loaded the soft soils below and raised the risk of long-term settlement across the playing surface, the last thing a professional-grade pitch can tolerate.

THE SOLUTION

Enviro-Rock foam glass aggregate was supplied as the lightweight fill beneath the field, accepted as the approved equal in place of the originally specified pumice. At a fraction of the weight of granular fill, it brought the field to grade while keeping load off the soft soils below.

The fill was placed over a geogrid-reinforced subgrade and shaped to the design profile, with an extensive perforated drainage network trenched into it before the sand and turf layers were built above.

~11,000 m³

of Enviro-Rock supplied beneath the field, in place of the specified pumice



~90%

lighter than conventional granular fill, easing load on the soft soils below



Enviro-Rock supplied	~11,000 m ³
Application	Lightweight fill beneath natural grass field
Reinforcement	Biaxial geogrid on approved subgrade
Field build-up above fill	Permeable aggregate, sand, turf sod
Recycled glass content	100% post-consumer

Enviro-Rock was placed over a geogrid-reinforced subgrade and graded to the design profile that shapes the field. A perforated drainage network was trenched directly into the lightweight fill, then separated by geotextile from the layers above: a permeable base aggregate, the play field sand, and the natural grass turf. Because the aggregate is light and free-flowing, it was placed with standard equipment and shaped quickly across the large field footprint.

At a fraction of the weight of granular fill, Enviro-Rock cuts the dead load that drives settlement in soft ground, while its angular, free-draining structure stays stable and moves water rather than trapping it, an ideal match for a field with an integrated drainage system. Supplied in place of the specified pumice, it delivered the lightweight performance the design called for at the scale the project required.

ENVIRO · ROCK