

Loch Garry Spillway



Salix supplied VMax P550, a composite Turf Reinforcement Mat, as part of our work with SSE Renewable Generation and UB Civils on Loch Garry dam safety works.

Over 400m of embankment and auxiliary spillways required a reliable and cost effective product which would withstand overtopping and extreme events.

The reinforcing element of VMax P550 ensures it is the best solution for high stress scenarios such as spillways.

VMax P550 has been independently tested at four research institutions and results are openly published from 1 hour to 50 hour flow durations. It has performed superbly in these trials, with little or no failure in the most extreme tests.

The failure criteria are based on vegetation failure and soil loss, as these are the key factors that lead to a surface erosion protection failure.

Products Used

- **VMax P550**



Spillways are designed to withstand long duration flows (10 hours or more) and changes in reinforced vegetation performance over time vary greatly depending upon the base-reinforcing product.

Most flat mats fail at the first serious test. Central to higher performance of the VMax P550 is a 3-D grid structure.

The 3-D grid greatly reduces velocity and shear stress within the structure and therefore reduces erosive force around the soil surface and base of the mat where the stem/root interface is located.

The site works were at a location 1500 feet above sea level and were undertaken during a heatwave. The turf has performed well under extreme weather conditions.

VMax P550 within the turf offers permanent turf reinforcement, increasing the power of vegetation to withstand high velocity flow regimes of up to 7.6m/sec.

P550 is composed of a permanent, ultra-high-strength, three-dimensional matting structure incorporated with a permanent 100% polypropylene fibre matrix.



Newly installed Vmax P550



Grasses established