

Amala Desert Rock

Red Sea - KSA



Amala Desert Rock

TYPE OF PROJECT
Debris Flow Barriers

YEAR OF CONSTRUCTION
2023

CLIENT
Red Sea Global

CONTRACTOR
Gulf Rock

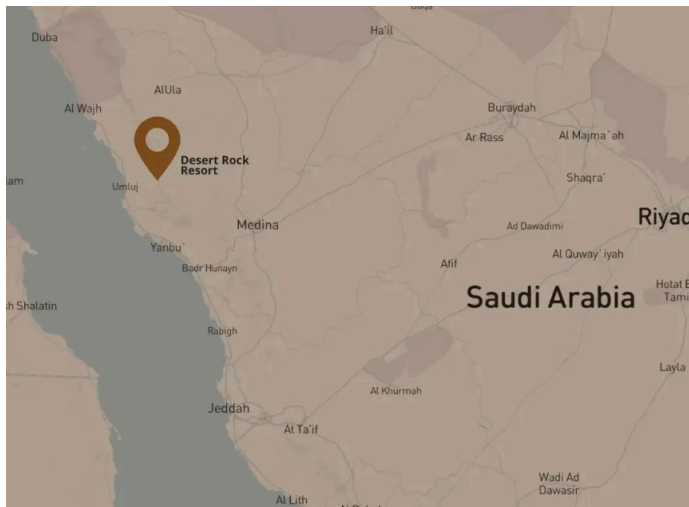
DESIGNER
Maccaferri

PROD. RELATED
Rockfall Barriers (1000 M2)

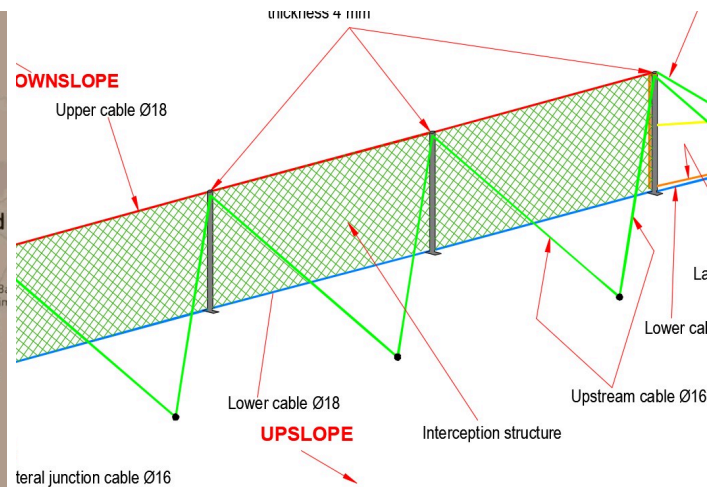
Challenge

The Desert Rock Resort site is located within a steep, rugged mountain valley characterized by fractured rock formations, near-vertical cliff faces, and natural fault lines. During excavation and ongoing site development, the area was identified as highly susceptible to heavy rockfall events, posing significant risks to construction activities, permanent structures, access roads, and long-term guest safety. The challenge was to mitigate

large and frequent rockfall hazards without disturbing the natural landscape or compromising the project's architectural vision of seamless integration with the terrain. Given the complex geology, limited access, and the need for a discreet, sustainable, and highly reliable protection system, Maccaferri was engaged to deliver a best-in-class, engineered rockfall protection solution tailored specifically to the site conditions.



Location



Typical Drawing

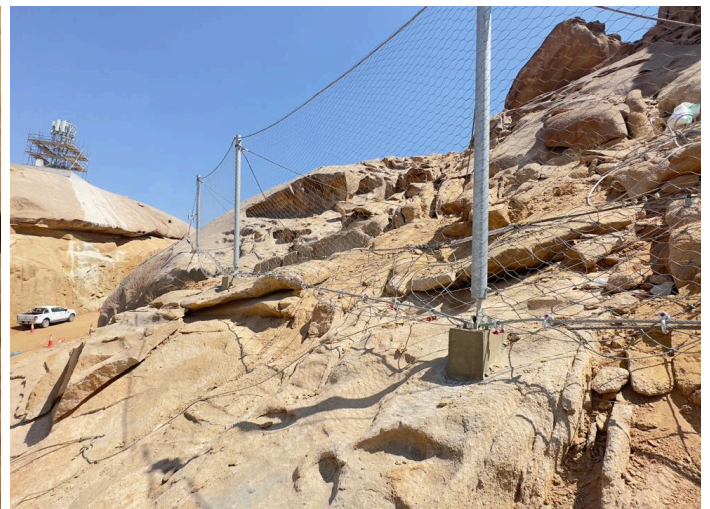
Solution

Maccaferri proposed and delivered an engineered rockfall protection system using **Rockfall Barriers with an energy absorption capacity of 75 kJ**, specifically designed to address the site's geological conditions and rockfall trajectories. The system was strategically positioned along critical impact zones to effectively intercept falling rocks while maintaining a minimal visual footprint in harmony with the natural landscape.

The modular design of the 75 kJ barriers allowed for **rapid installation**, even in challenging terrain and restricted access areas, enabling fast progress on site without disrupting construction activities. This solution provided a **safe, reliable, and cost-effective** means of protecting infrastructure, access roads, and personnel, ensuring enhanced safety while supporting the project's tight construction timelines.



During Construction



After Construction



OPEN GOOGLE MAPS



OPEN GOOGLE EARTH