

Taif - KSA



Al Hada - Steel Grid HR 30				
TYPE OF PROJECT Slope Protection	YEAR OF CONSTRUCTION 2024	CLIENT MOT - Minitry Of Transport	CONTRACTOR Mutleg Al Ghweari Contracting Company	DESIGNER Maccaferri
PROD. RELATED Rockfall Barriers (35000 M2)				

Challenge

Al Hada City is characterized by steep mountainous terrain, winding roads, and significant elevation changes. Due to the natural geology, fractured rock formations, and steep slopes, the area is highly susceptible to **rockfall hazards**, particularly during periods of heavy rainfall and temperature variations. These rockfalls pose a serious risk to **public safety, road users, and nearby infrastructure**, potentially causing traffic disruptions, property damage, and accidents. Existing protective measures are limited and do not

provide adequate long-term mitigation against increasing rockfall events. Therefore, the authorities are seeking **reliable, durable, and proven rockfall protection solutions** that can be effectively installed in challenging mountainous conditions, minimize maintenance, and ensure long-term safety. **Maccaferri’s engineered rockfall protection systems** are considered a suitable solution to mitigate these risks while preserving the natural landscape of Al Hada City.





During Construction



During Construction

Solution

To address the rockfall hazards identified in Al Hada City, an integrated and engineered protection solution is proposed, combining active slope stabilization and passive rockfall interception systems. The solution is specifically designed to suit the steep mountainous terrain, fractured rock geology, and environmental sensitivity of the area. The proposed approach utilizes a combination of **slope surface protection, rock stabilization, and energy dissipation systems** to control

rockfall hazards at source and along potential rockfall trajectories. This layered protection strategy ensures enhanced safety for road users and nearby infrastructure. **Maccaferri Steelgrid® 30** is proposed as the primary **active protection system** for stabilizing rock slopes and preventing rock detachment at the source. The system consists of a high-strength, double-twisted steel wire mesh designed to conform closely to the rock surface and restrain unstable blocks.



During Construction



After Construction





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