URBAN FLORA
Discovering Nature

CASE STUDY



ACC's Limited Adani Cement – Wadi Limestone Mines Afforestation Project

Wadi, Kalaburagi District, Karnataka

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Team on site ahead of pit preparation.



Fully Mobile Irrigation

PROJECT HIGHLIGHTS

Execution period

Dec 2025 – Mar 2026, & 3-year maintenance contract

18 Acres

Green cover restored

ACC's Limited Adani Cement has operated the Wadi Limestone Mines for many years, carrying an on-going environmental responsibility to restore degraded land impacted by mining activities. UrbanFlora was engaged to design and execute an afforestation program across the site, restoring 18 acres of green cover on previously degraded and unusable land. The project involved planting 15,000 saplings across 18 acres of previously degraded land. Watering was carried out entirely through mobile tankers, with zero fixed irrigation infrastructure.

Our Approach

Work was planned around the constraints of an active mining lease rather than a conventional landscape site. Soil conditions, water logistics, and equipment restrictions were assessed before planting began, and a mobile watering regime was established to support the plantation through the driest part of the year without relying on monsoon rainfall. With tractors and other standard landscaping equipment restricted within the mining area, execution relied on tanker-and-pump systems and manually managed watering routines.



Before: barren, degraded mining land prior to restoration

The project represents a highly constrained operating environment, with limited infrastructure, restricted equipment access, and the logistical challenges of working within an active mining site. With no fixed irrigation infrastructure available, execution relied on a fully manual, mobile, off-grid watering system designed to support plantation establishment under demanding site conditions. This project demonstrate UrbanFlora's ability to adapt landscape execution to diverse site conditions, infrastructure availability, and operational requirements.



After: established green cover on the same restored ground

Challenges

Area	Challenge	Solution
Restricted Site Mobility & Equipment Access	With active mining operations, tractors and heavy vehicles were restricted. Even moving people, plants and materials across the site required careful planning.	Our horticulturists worked within the site's limitations, planning movement carefully, using permitted access routes and relying on hand-held mechanised augers for pit preparation.
Size of the Sapling vs. Survivability	Client's preference was smaller saplings, not already established trees. Smaller saplings are more vulnerable to heat and drought stress on a mining site. Higher mortality risk during theestablishment phase	We gave them the care they needed to establish. Intensive tanker watering, close monitoring and replacement planting helped support sapling survival.
Extreme Site Temperature	Extreme ground and ambient temperatures created a high risk of heat stress for newly planted saplings.	We worked ahead of the harshest conditions. Plantation was completed between December and March, giving the saplings time to establish before peak summer.
No Fixed Irrigation Infrastructure	No water pipeline, electricity, or irrigation network on site. Conventional fixed irrigation not feasible	Fully mobile, tanker-and-pump watering system deployed across the site. Water delivered by hose from motorised pump units to each planting zone.

Results & Impact

- Degraded, previously unusable mining land transformed into an establishing 18-acre green belt within the mining lease area.
- A fully mobile, off-grid watering system implemented without any fixed irrigation infrastructure.
- Plantation successfully established through peak summer conditions without relying on monsoon rainfall.
- Direct contribution to ACC's afforestation and mine-reclamation objectives within an active mining lease.
- Demonstrated capability to deliver ecological restoration in a remote, infrastructure-limited, and operationally restricted mining environment.



ACC's Limited Adani Cement and UrbanFlora teams during the plantation & reclamation drive.



Wadi demonstrates what can be delivered when a site offers none of the usual conveniences - no power, no water line, no fixed irrigation infrastructure, restricted equipment access, and a location far from any city.

For organizations managing mining leases, industrial sites, or land-reclamation obligations, this project shows that difficult site conditions don't have to limit the potential for ecological restoration. With the right planning, resource mobilisation, and execution discipline, restoration can be delivered even in the most constrained operating environments.

THANK YOU!

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