

Case Study

Segment: Mixed-use District

Market: India

Project: Premium Mixed-use Business & Lifestyle District, Mumbai

In operation: since 2022

About the project: A landmark mixed-use destination in Mumbai combining high-end residences, premium offices, and a vibrant ecosystem of dining, retail, events, and entertainment. The district integrates smart infrastructure and sustainability into every layer of its planning and operations.

To match its premium positioning and sustainability ambitions, the developer selected Envac's Automatic Waste Collection System (AWCS) as the core waste management solution for both residential and commercial areas.

Area overview: Residential wing: Two residential towers (West & East) and residents' clubhouse. Commercial wing: Dining, banquet, flex/event spaces, retail, and office buildings.

Goal: The Envac system supports the project's goals of maintaining high hygiene standards, improving operational efficiency, and creating a clean, premium environment for residents, tenants, staff, and visitors.

Terminals/collection stations: 2 dedicated Envac stations (1 commercial station, 1 residential station)

How the Envac system works:

Users separate waste at source into wet and dry fractions, depositing it into dedicated inlets. Each inlet connects to vertical gravity chutes that convey waste to the underground pipe network. There,

- Waste is temporarily stored at valves until a collection cycle is initiated.
- Collection cycles are triggered by level



sensors or scheduled sequences controlled via Envac's Automation Platform (EAP).

- Vacuum exhausters at the collection stations create negative pressure in the pipes.
- When the required vacuum is reached, valves open in a controlled sequence, and waste is transported at high speed through the pipes to the central stations.

The process is fully enclosed from inlet to station, minimising manual handling, exposure, and disturbance to users.

Why Envac? Key Drivers

- Fully automated, enclosed waste transport.
- No manual handling of waste inside buildings.
- Significantly improved hygiene.
- Elimination of odour, and pests associated with traditional waste collection.
- Centralised, scheduled collection cycles managed.
- Minimal human intervention, boosting both safety and operational reliability.
- Cleaner, attractive common areas, aligning with the development's premium brand.

Waste is effectively "taken off stage", allowing building operations and user experience to remain the primary focus.

Better sustainability performance, including improved segregation, on-site composting of wet waste, and reduced reliance on conventional internal waste logistics.



Environmental & sustainability impact

The Envac system supports the project's broader sustainability framework by:

- Reducing internal waste movements and the need for trolleys and small vehicles within the

premises.

- Improving segregation quality at source, raising the recovery potential for recyclables.
- Enabling on-site composting of wet waste, fostering a circular approach to organic material.
- Lowering the overall environmental footprint of waste operations compared to a purely manual system.

Combined with the development's broader innovative and green infrastructure initiatives, Envac's AWCS helps position this Mumbai district as a reference point for modern, sustainable mixed-use developments in India.

On-site wet waste treatment

A key differentiator of this project is its wet waste treatment process:

- Wet (food/organic) waste, collected via the Envac system, is routed to a dedicated treatment process.
- The wet fraction is converted into compost, reducing the volume of waste sent offsite and supporting circular resource use within or around the development.



By combining automated collection with on-site treatment, the project moves beyond simple disposal to a more regenerative, resource-efficient model.

