

Case Study

BRITANNIA INDUSTRIES LTD.

B A R A B A N K I

Wastewater Treatment Plant (WWTP) By
Enhanced Wapp Systems India Pvt. Ltd.

SWIPE TO EXPLORE ➤

PROJECT OVERVIEW

As part of a new food manufacturing facility in Barabanki, **Britannia Industries Limited developed a WWTP to manage process & domestic wastewater.**

Objective:

- ◀ Environmental compliance
- ◀ Sustainable water management
- ◀ Continuous plant operations

WAPP executed integration, erection, commissioning & O&M support.

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CLIENT & STAKEHOLDERS

Client

Britannia Industries Limited

Technology Provider & PMC

Environmental Engineering Consultant

Implementation Partner

Enhanced WAPP Systems (India) Pvt. Ltd.

Location:

Barabanki, Uttar Pradesh

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TREATMENT CAPACITY

WWTP Capacity: ~172 KLD

- ◀ Treats food processing wastewater
- ◀ Handles industrial + domestic streams
- ◀ Ensures compliance & sustainability
- ◀ Supports continuous production

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PROJECT SCOPE

End-to-end integration included:

- ◀ Equipment procurement & installation
- ◀ Fabrication & erection
- ◀ Piping & hydraulics
- ◀ Electrical & instrumentation
- ◀ Testing & commissioning
- ◀ Stabilization & performance validation
- ◀ 12-month O&M support

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TREATMENT PHILOSOPHY

Food wastewater challenges:

- ⌂ High organic load
- ⌂ Suspended solids
- ⌂ Oil & grease
- ⌂ Variable loads

Approach:

- ⌂ Efficient solids removal
- ⌂ Optimized biological treatment
- ⌂ Energy-efficient aeration
- ⌂ Reliable automation

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SYSTEM CONFIGURATION

Process Equipment

- ◀ Centrifugal pumps
- ◀ Progressive cavity pumps
- ◀ Root blowers
- ◀ DAF system

Mechanical Systems

- ◀ Screening systems
- ◀ Mixing assemblies
- ◀ Clarifier systems

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TREATMENT SYSTEMS

Biological Treatment

- ◀ Coarse & fine bubble aeration
- ◀ Optimized oxygen transfer

Filtration & Polishing

- ◀ PSF & ACF
- ◀ Chlorination systems

Electrical & Instrumentation

- ◀ Control panels
- ◀ Monitoring systems
- ◀ Automation-ready setup

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EXECUTION STRATEGY

- ⌂ Engineering validation
- ⌂ Procurement & fabrication
- ⌂ Mechanical + piping integration
- ⌂ Electrical & instrumentation
- ⌂ Testing & commissioning
- ⌂ Stabilization

Delivered within strict timelines.

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HOWRAH TREATMENT FACILITY:
RESTORING WATER, CULTIVATING LIFE.

O&M SUPPORT

Duration: 12 Months

- ◀ Operation supervision
- ◀ Process optimization
- ◀ Performance monitoring
- ◀ Preventive maintenance

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KEY CHALLENGES

- ⌂ Industrial construction environment
- ⌂ High organic wastewater load
- ⌂ Multi-equipment integration
- ⌂ Tight commissioning timelines
- ⌂ Long-term reliability

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SOLUTIONS DELIVERED

- ◀ Modular integration approach
- ◀ Advanced DAF for FOG removal
- ◀ Optimized aeration systems
- ◀ Robust electrical systems
- ◀ Structured commissioning

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CONCLUSION

This project highlights the role of
engineering integration in sustainable manufacturing.

Advanced technology + precise execution + O&M support
= **efficient, compliant, and future-ready operations**