CASE STUDY

BUND CONSTRUCTION

FEBRUARY 2025

As part of an infrastructure upgrade to improve secondary containment and environmental compliance, our team was commissioned to **construct a new bund for a chemical storage area.**

The project was completed in accordance with industry best practices and in line with CIRIA 736 guidance, ensuring suitability for the stored materials and future operational needs.

AT A GLANCE

Challenges

- Complex regulatory compliance
- Structural integrity assurance
- Chemical resistance requirements

Result

- Fully compliant secondary containment
- Durable watertight bund
- Enhanced environmental protection

CIRIA (C736) GUIDANCE STATES:

"The quality of design and construction is fundamental to the integrity of the containment system. It is therefore imperative that any designer, contractor or maintenance works operative engaged to construct, extend or modify a containment system is experienced in designing and constructing to the relevant class of containment. As a minimum, the parties should have a proven history of carrying out the relevant type of work".

SCOPE OF WORKS

- **Design & Engineering Review**: The bund was designed in consultation with a structural engineer to meet specific dimensional, freeboard, and loading requirements, in accordance with CIRIA 736. All proposed designs were validated to ensure suitability for the intended chemical storage and operational usage.

- **Surface Preparation:** The existing concrete floor was inspected and repaired to provide a structurally sound base. Surface irregularities were corrected to support effective bund wall bonding and membrane installation.

- **Bund Wall Construction:** Walls were constructed to pre-approved dimensions using durable materials. Critical wall-to-floor junctions were reinforced with precision-formed fillet joints to enhance strength and resistance to leaks at high-risk intersections.

- **Containment Lining System:**

1. A *high-adhesion primer coat* was applied to all internal wall and floor surfaces to prepare for sealing layers.

2. A chemical-resistant membrane was installed across the bund interior to form the primary impermeable barrier.

3. A final waterproof sealant coating was applied throughout to complete the system, providing long-term protection against chemical ingress and environmental damage.

OUTCOME

The completed bund delivers a robust, chemically resistant secondary containment system capable of withstanding potential leaks or spills.

By aligning with CIRIA 736 guidance and implementing engineered controls at every stage, the project successfully meets regulatory and operational demands, reinforcing the client's environmental risk management and compliance profile.