CASE STUDY — WATER INFRASTRUCTURE / OPERATIONAL CONTINUITY / COMPLIANCE MANAGEMENT

# WCG Water Security Programme

Groundwater treatment delivery and long-term operations across Western Cape Government critical facilities — 2018 to 2025

## PROJECT SNAPSHOT

**Client**
Western Cape Government

**Facilities**
Hospitals, clinics, administrative sites

**Duration**
2018 – March 2025

**Sector**
Water infrastructure / public sector

**Role**
Director, Operations & Project Coordination

**Project Type**
Government programme — outsourced O&M

## KEY METRICS

**2018–2025**
Long-term operational involvement across the full programme

**9 provincial sites**
Hospitals, clinics and administrative facilities

**12 sites at peak**
Managed with three dedicated field teams

**20–500 kl/day**
Daily demand range across the site portfolio

**Structured O&M**
Weekly, monthly and annual reporting protocols

## CONTROL & AUTOMATION

*VSD and PLC panel — pressure, flow and performance management*

THE SITUATION

### Critical public facilities needed reliable alternative water supply

During Cape Town's drought crisis, the Western Cape Government implemented a Water Business Continuity Plan for hospitals, clinics, and administrative facilities. Keypoint SA played a leading role in delivering and operating groundwater-based treatment systems across multiple provincial sites. The work included site-specific system design coordination, construction coordination, commissioning, compliance monitoring, ongoing operations, maintenance, and structured reporting.

THE COORDINATION CHALLENGE

### Multiple sites, multiple technologies, long-term accountability

Every site had different source-water characteristics, treatment requirements, infrastructure constraints, and compliance obligations. The programme required coordination across engineering contractors, process engineers, laboratory partners, government stakeholders, site managers, suppliers, and field teams. Once operational, each system required preventative maintenance, reactive troubleshooting, telemetry monitoring, lab-based compliance analysis, and structured reporting — sustained across years, not weeks.

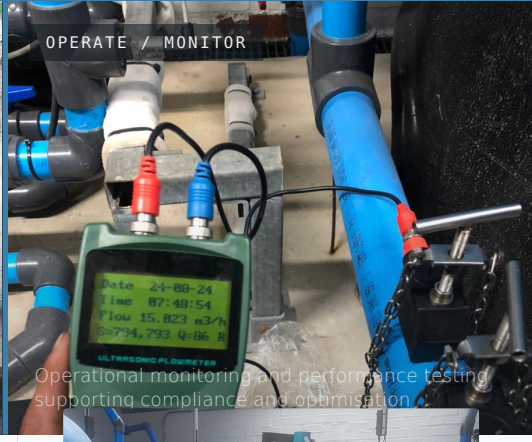
MIKE'S ROLE

### Directing delivery, operations and compliance across the portfolio

Mike Bird directly oversaw technical design coordination, construction coordination, commissioning, compliance tracking, operations, team management, stakeholder communication, reporting, and troubleshooting. He coordinated engineering and process specialists, managed field teams, maintained operational continuity across the portfolio, resolved technical failures, and ensured systems remained functional and compliant for the duration of the programme.


Multi-technology treatment plant configured for site-specific demand and treatment requirements


Field installation and commissioning, including pipework integration and on-site problem solving




Operational monitoring and performance testing supporting compliance and optimisation

## Full treatment, compliance and O&M capability across the portfolio

- Groundwater supply integration
- Reverse osmosis
- Ultrafiltration
- Site network integration
- Handheld water testing
- Preventative maintenance
- Structured O&M logs
- Government stakeholder reporting
- Media filtration
- Chlorine dioxide treatment
- Water conditioning
- Telemetry & BMS monitoring
- Laboratory compliance analysis
- Reactive troubleshooting
- Weekly / monthly / annual reporting
- Field team coordination

EXAMPLE INTERVENTION

### Restoring a system installed but never commissioned

One inherited site had a fully installed treatment system that had never been commissioned due to previous service provider failures. After months offline, the site was dependent on limited external supply. Keypoint investigated pipe disconnects, internal blockages, and missing infrastructure safeguards — repaired and flushed the system, installed subsurface thrust blocks, and restored full operational functionality.

*Field technician completing maintenance and inspection log on site — structured O&M records maintained across all facilities*

OUTCOME

### Functional, compliant systems — sustained over seven years

- ✓ Operational continuity for critical public facilities
- ✓ Functional groundwater treatment systems across multiple sites
- ✓ Compliance monitoring and reporting protocols established
- ✓ Up to 12 operational sites managed at peak
- ✓ Three dedicated field teams coordinated
- ✓ Reduced dependence on municipal water supply
- ✓ Scalable water-resilience model for provincial facilities

WHY THIS MATTERS NOW

*This was not just installation. It was the long-term operation, monitoring, maintenance and compliance management of live water systems across multiple public-sector sites — sustained for seven years. The same capability applies to commercial water resilience, treatment-system operations, estate water management, and multi-site infrastructure coordination.*