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Farm Location:

Bura, Tana River County,
Kenya.

JOB DESCRIPTION

Position of Employment:	Bulk Water and Irrigation Engineer
Reporting to:	Agricultural Engineer
Cover in Case of Absence:	Liaise with Agricultural Engineer
Date of Commencement:	September 2026
Department:	Cane Development
Location of employment:	TRSC Farm in Bura, Tana River County.
Job Reference No.	TRSC/CD/BWIE/2026

Job Purpose

The Bulk Water and Irrigation Engineer will lead the engineering supervision, contractor coordination, quality control, testing, and commissioning of the bulk water infrastructure while managing the operation, maintenance, and progressive expansion of centre-pivot irrigation for a commercial sugarcane plantation. This hands-on role ensures water is efficiently abstracted, pumped, filtered, conveyed, and delivered to centre-pivot blocks at the required flow and pressure. The Engineer is responsible for translating engineering designs into reliable field infrastructure, preparing irrigation schedules based on crop needs, diagnosing system faults, and supervising field teams and subcontractors in a remote environment.

Reporting and Working Relationships

- **Reports To:** Agricultural Engineer
- **Supervises:** Civil Supervisors, Site Engineers, Pipeline Crews, Survey Teams, Plant/Pivot Operators, QA/QC Inspectors, Irrigation Technicians, Pipe Repair Crews, and specialist subcontractors.
- **Coordinates With:** Cross-functional project teams including Agronomists, Electrical/Mechanical Engineers, Civil & Land Development Specialists, Quantity Surveyors, Procurement, HSE, and Survey teams as well as NIA/regulatory stakeholders and Irrigation Suppliers.

Principal Accountabilities

- **Water Infrastructure & Civil Works:** Oversee canal abstraction interfaces, pump station civil works, filtration foundations, mainlines, sub-mains, valve chambers, and drainage protection.
- **Irrigation Scheduling & Planning:** Prepare daily and weekly irrigation run plans using crop stage, soil moisture, rainfall, and evapotranspiration (ET) demand.
- **Design & Technical Review:** Review construction drawings, irrigation layouts, hydraulic assumptions, BOQs, pump curves and pivot designs before field execution.
- **Pipeline & System Supervision:** Supervise excavation, pipe bedding, jointing (HDPE steel, uPVC), and backfilling, while monitoring center pivots for travel speed, application depth, and alignment.

- **Trouble shooting & Asset Management:** Diagnose issues such as low pressure, pipe bursts, or electrical trips, and develop preventive maintenance schedules for pivots, pumps and motors.
- **Quality Assurance & Handover:** Coordinate pressure testing, flushing, pump trials, pivot commissioning, ensure the delivery of as-built records, and technical handover packages.
- **HSE & Reporting:** Enforce safety discipline for high-risk activities (excavation, pressurized systems, electrical tasks) and maintain precise logs for water-use, fuel, and maintenance costs.

Key Performance Indicators (KPIs)

- **System Readiness & Delivery:** Timely completion of infrastructure milestones and high pivot uptime with rapid response to leaks and faults.
- **Water Application Accuracy:** Precise execution of irrigation schedules aligned with sugarcane growth stages from establishment to ripening.
- **Operational Efficiency:** Achievement of stable system pressure, high uniformity, minimized water losses, and strict cost control for energy and repairs.
- **Subcontractor & Crew Management:** Effective oversight of third-party crews through disciplined site control, target-setting, and performance tracking.
- **Quality Assurance & HSE: Full** Compliance with technical specifications and zero-harm safety performance across all field operations.
- **Documentation: Timely submission of** QA/QC inspection requests, water-use logs, O&M manuals, and monthly performance reports.

Required Qualifications & Experience

- **Education:** Bachelor's degree in civil engineering, Water Engineering, Irrigation Engineering, Agricultural Engineering, or Biosystems Engineering. Registration with the Engineers Board of Kenya (EBK) is strongly preferred.
- **Experience:** 5–8 years of progressive engineering experience, with at least 3 years in water infrastructure/major civil works and 3 years of hands-on experience with center pivot systems.
- **Technical Expertise:** Practical experience with various pipeline materials (HDPE, steel, uPVC) competence in hydraulic calculations, pump curves, and filtration systems.
- **Leadership:** Demonstrated ability to manage multi-disciplinary contractors and field technicians in remote or rural terrain.
- **License & Certifications:** Valid driver's license, training in Project Management, HSE, or irrigation commissioning is an asset.