

### **1.3.23 Remote Terminal Unit**

#### **1.3.23.1 General**

- A. Each RTU shall be microprocessor based equipment having a proven track record within the wastewater industry, having a robust modular construction, and constructed for ease of maintenance and repair.
- B. Functional Requirements
- C. RTU's shall be provided with following functions, as a minimum, but not be limited to:
  - a. Support for DNP-3 protocol.
  - b. Data acquisition from plant equipment (digital and analogue inputs).
  - c. Data recording and time stamping (time and date).
  - d. Sequence of events recording.
  - e. Alarm management (prioritise) including report by exception.
  - f. Handling data received from control centres.
  - g. Data processing (including math functions).
  - h. Initiating commands (digital and/or analogue outputs) & software routines (pump sequence control).
  - i. Self diagnostics
  - j. Communications control including route selection.
  - k. Programming and diagnostics via control centre, & RTU configuration and maintenance units.
  - l. On-line and off-line RTU configurations.
  - m. RTU and modem shall get ADM – SCADA approval
  - n. Modem shall get Etisalat approval
  - o. real-time operating system
  - p. Up to three Ethernet ports
  - q. Up to four serial communication ports
  - r. Up to two radio modem ports
  - s. Up to 2 USB ports