

Integrated Water Level Monitoring

Client:- Somerset Drainage Board Consortium

Project:- Southlake Moor Trial

Background

The Somerset Levels is an internationally important wetland habitat renowned for its wet ditches, grassland habitats and large numbers of migratory wildfowl and waders that visit the area in winter. Significant parts of the Somerset Levels are designated as Sites of Special Scientific Interest, a Special Protection Areas and Ramsar Site.

The Southlake Moor Favourable Condition Project was developed and implemented by the Parrett IDB (part of the Somerset Drainage Boards Consortium) to restore 200ha of grazing marsh habitat by improving water level management and allowing winter flooding on Southlake to provide valuable habitat for migratory birds. The project has successfully integrated ecological benefits with flood attenuation and sustainable farming practices.

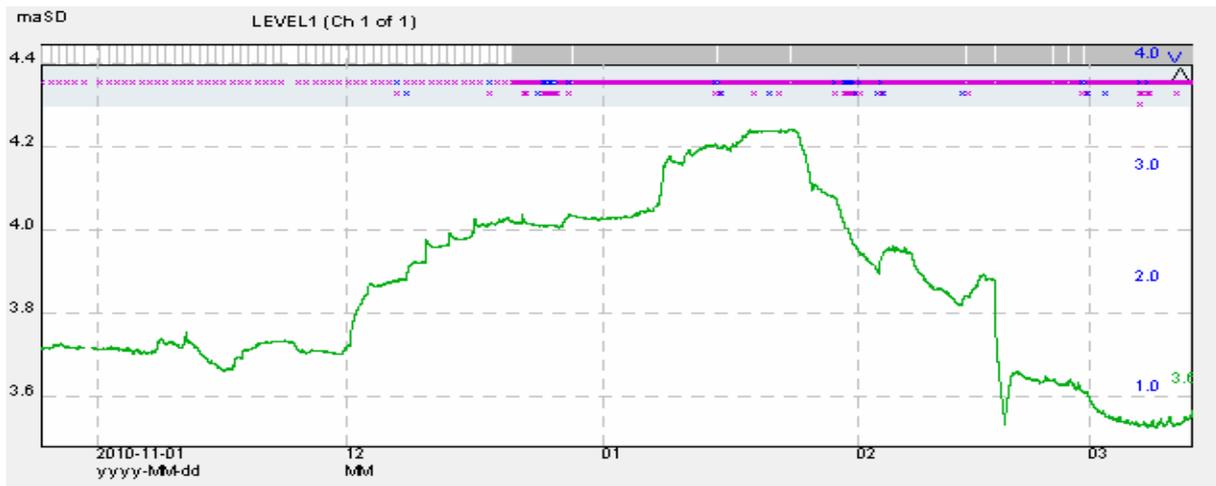
Objectives

Reliable and up-to-date water level monitoring was considered essential and a telemetered network was a critical element for timely and effective management of water for Southlake Moor. Hydro-Logic successfully delivered an initial trial project recording levels at three key sites, including inflow and outflow control structures. Active monitoring and management of water levels was achieved using Hydro-Logic's Timeview2 data website. A number of threshold alarms were set up to enable an operational response to critical water level changes on Southlake Moor and adjacent watercourses.



Site configuration

The three monitoring sites measure a total of five key water levels, informing operational delivery and providing continuous environmental data. Isodaq GPRS telemetry loggers were paired with high resolution pressure sensors, providing a cost effective solution for remote monitoring. Long life lithium cells were used to improve efficiency and reduce the requirement for regular site visits. Gaugeboards were also installed at each site as a means of independent water level reference.



Future Monitoring

The Somerset Drainage Boards Consortium are implementing a further nine similar water level management improvement schemes in Somerset. As part of this work Hydro-Logic are to provide an integrated network of over 30 telemetered water level monitoring sites managed through the Timeview2 interface. This includes installation, operation and maintenance at all sites over 5 years.

