

# CONTROLLING WATER AT TOWCESTER LEISURE CENTRE

## PROJECT DETAILS

### Client

Towcester Leisure Centre

### Completed

April 2021

### Oakland Business Line

Leisure

### Objective

BMS Upgrade, Life Cycle Improvements Project Summary & Evaluation

## BMS UPGRADE, LIFE CYCLE IMPROVEMENTS PROJECT SUMMARY & EVALUATION.

Last year Oakland was tasked with delivery of a comprehensive BMS upgrade and lifecycle project which focused on achieving key project ambitions which included installation of effective, energy saving and easily maintainable equipment across the Parkwood Group, Towcester leisure centre site.

### Scope of works

- Pool and Wave Control Panel Replacement
- Installation of inverter drives
- Flume pump overhaul
- Pool auto fill overhaul
- New wave machine control panel
- Poolside control panel renovation
- Main boiler control panel overhaul
- LPHW Flushing along with pipework and valve replacement
- Cold water booster set replacement
- Control strategy redesign

### Pool and wave control panel

When replicating the existing out of date pool and wave control panel and replacing with new controls, design of the new control panel was complete with Trend controls so the client can control every aspect of the system with ease.

### Wave Machine panel installation.

The existing Wave Machine was part of the old control panel stripped out. It was decided the best design option was to build a dedicated Wave Machine panel and opted for a Siemens PLC.

### Pool equipment

Inverter drives have been fitted to each motor in the lower plant room, not only does this give better control but a massive energy saving of a minimum of 20% per motor.



Internal pool control panel



Plant room AHU pipework



Wave machine control panel



Wave machine new motor

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### Poolside Control Panel

We managed to successfully renovate the panel which now matches the poolside walls, each switch is easy to use and has many more features than previous.

### Main Boiler room Control Panel

In the main boiler room control panel existing Landis controllers was stripped out and new new IQ4E controllers were installed to recreate a working solution using the new controllers.

### Pool AHU's

Setting the strategy of the Air temp to directly link to the Water temperature so this sits 1 degree above the water temperature to prevent condensation and setting an automatic night setback to go a minimum of 1 degree lower to save energy completed our pool AHU remedial work.

### Invertor energy savings

A substantial amount of energy is wasted because most fans and pump systems are oversized, usually because of too much contingency planning in the design stage. To make matters worse, this is further compounded by the practice of rounding up to the next standard motor size.

### Results

This Parkwood site is now running efficient controls and equipment which will see them benefit at a time of continuing energy price prices making it a great example to others the importance of BMS control, equipment lifecycle and maintenance.