



### Location

Stanley Park

### Client

Liverpool County Council

### Project at a glance

Function suite and café area

Trend BMS controllers

Control panels build in-house

Commissioned by BTS

### Systems

Automated Natural Ventilation

BMS integrated Mitsubishi A/C

LTHW Boiler Plant

Air Handling Units

Front-end computer

234 Europa Boulevard  
Gemini Business Park  
Warrington  
Cheshire  
WA5 7TN

Tel : 01925 419 416

Fax : 01925 419 417

As part of the Liverpool Stanley Park regeneration scheme, Isla Gladstone Conservatory was restored to its former glory and a more efficient heating and cooling system installed.

The upper floor function area includes underfloor heating, natural ventilation, and air conditioning units. The three systems are interlocked so that no two will operate simultaneously, for maximum efficiency. The area has a single setpoint, when below this setpoint the underfloor heating will be enabled to bring the space up to temperature.

When above setpoint the automated windows are opened to “free cool” the space. If the space temperature continues to climb, the windows are closed and the air conditioning enabled by the BMS. When at setpoint the windows shall also be opened in a high CO2 condition in the space, to allow fresh air into the building.

The windows are zonally controlled so that if a high wind speed is detected by the wireless weather station, the windows facing that direction can be closed. All windows are also closed when the weather station detects rain. The function area time zone is fully programmable to enable the user to input dates and times for bookings.

The café area is heated by an underfloor heating circuit to maintain the space temperature. The flow setpoint of the circuit is compensated based on outside air temperature.

Each area also has a dedicated air handling unit for heated, when required, ventilation including the toilets and kitchen areas. The two kitchen gas supplies are individually interlocked so as not to be enabled without ventilation in the areas.

[buildingtechnologysystems.co.uk](http://buildingtechnologysystems.co.uk) : [About Us](#) - [Contact Us](#) - [Find Us](#) - [Mission Statement](#)



**Andover Controls**  
System Integrator

DIRECTORS  
D. A. Brookes • G. P. Spark • P. Blower  
Company registered in England No. 3211394

Member of  
**BACnet**  
International



**Location**

Stanley Park

**Client**

Liverpool County Council

**Project at a glance**

Function suite and café area

Trend BMS controllers

Control panels build in-house

Commissioned by BTS

**Systems**

Automated Natural Ventilation

BMS integrated Mitsubishi A/C

LTHW Boiler Plant

Air Handling Units

Front-end computer

234 Europa Boulevard  
Gemini Business Park  
Warrington  
Cheshire  
WA5 7TN

Tel : 01925 419 416

Fax : 01925 419 417

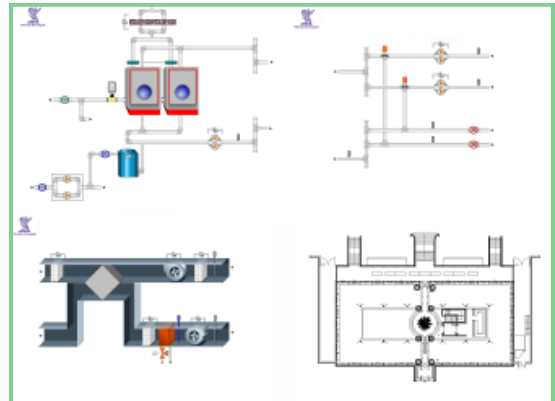
**Control System Overview**

- Trend IQ3 network controllers
- Trend XNC-to-Mitsi G50 Air Conditioning Units interface
- Front End PC to view embedded graphic pages
- DC Window Actuator controllers
- Wireless solar powered weather station

**Special Control Features**

Trend XNC interface to Mitsubishi G50 controller enables the BMS to control all AC units individually as well as monitor their status for display on front end PC.

Window actuators opened proportionally to maintain space temperature and CO2 levels. AHU fan speeds modulated to maintain space CO2 levels. AHU recuperator dampers opened to reclaim heat from the space, when available, before heating coils opened.



**Energy Conservation Strategies**

- Natural Ventilation used as 'Free Cooling' before enabling the air conditioning system.
- Solar powered weather wireless station prevents the need for a mains power supply.
- Underfloor heating temperature modulated based on outside air temperature.
- All water, electricity, gas, and tenant heat meters are logged by the BMS.
- Trend BMS utilises optimised time schedules so that plant enabled only as required to maximise economy.

[buildingtechnologysystems.co.uk](http://buildingtechnologysystems.co.uk) : [About Us](#) - [Contact Us](#) - [Find Us](#) - [Mission Statement](#)



DIRECTORS  
D. A. Brookes • G. P. Spark • P. Blower  
Company registered in England No. 3211394

