



St Peter's School, Cambridge

Optimised facility use achieves rapid return on investment – case study

St Peter's School, Cambridge, is a leading independent, co-educational secondary school in New Zealand. With over 1,000 students, 450 students living on site, and approximately 350 staff, St Peter's is one of the largest boarding schools in the country. Around the clock site security and facilities management is imperative to ensure safety and deliver optimum operational efficiency.

Fast facts

Industry: Education

Business type: School

Area: 100 acre academic campus

Number of employees: 350

Number of doors: 101 access controlled doors (+/- 120 relay access doors)

Gallagher technology used: Command Centre v7.30, Controllers, MIFARE® card technology, T-Series Readers, Prox Plus PIN Readers, Biometric Readers, and Remote Arming Terminals.

Key industry challenges

- Ensuring appropriate access to students/staff onsite
- Implementation of lockdown and evacuation procedures
- Restricting access to school areas from the general public
- Protecting property and assets
- Providing unobtrusive but robust security
- Controlling and managing multiple systems e.g. heating, cooling, lighting via a single platform
- Visitor time and access management

St Peter's originally contacted Gallagher more than 10 years ago for main gate security and access control for their gymnasium to assist with facility hire. "We needed a system that was modular, discreet, scalable, SQL based, and that allowed us to add and retrieve information via OPC," said Gareth Pryce, ICT Manager at St Peter's School.

Since installation, the scale of the Gallagher system has grown considerably. St Peter's has now integrated the Gallagher Security solution as their building management system on an impressive scale and the return on this investment has been significant.

Facilities Management

Gallagher's central management software solution Command Centre is utilized to control all aspects of facilities management at St Peter's School. The Gallagher solution monitors and controls heating, lighting, air conditioning, PIR's, windows, read status and doors open/closed within all St Peter's rooms.

The installation of smart electricity meters, which can identify and quantify savings, is being utilized to measure and report energy savings across the site.

"In buildings where we have purely installed the Gallagher system and nothing else we are achieving a 30% energy saving," said Gareth. "Return on investment is being seen within 6 to 24 months of a complete solution being installed, dependent upon the type of heating system and the staff within the building."



As a direct result of the Gallagher installation an additional saving for the school on plant investment has been identified. Specifically, this can be seen in an increase in the life span of air conditioning units due to their reduced usage and the removal of time clocks on site due to the system's ability to control all individual systems.

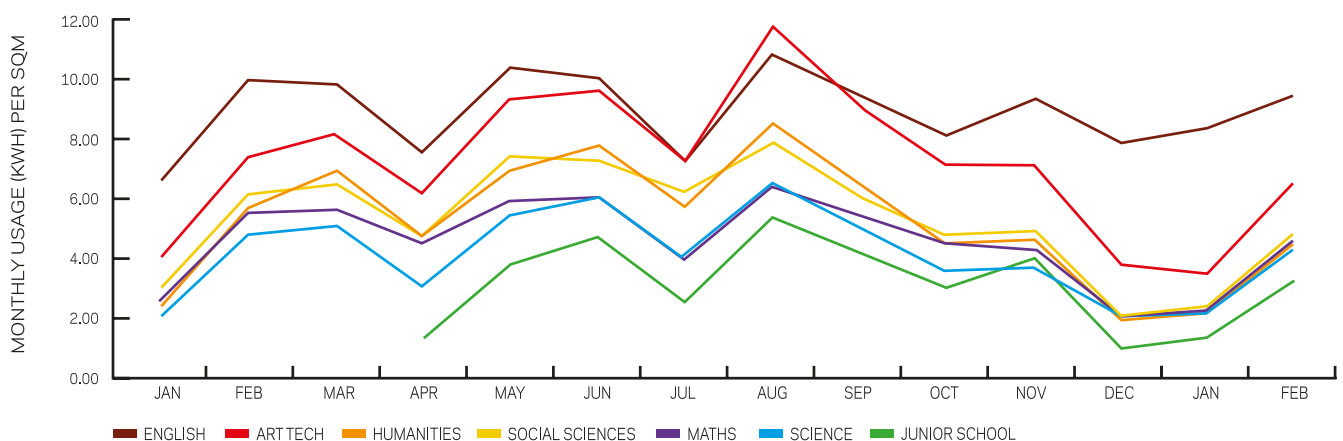
St Peter's School's continued commitment to fully utilizing the capabilities of the Gallagher system is evident in their most recent additions of an indoor swimming pool facility and Junior School building. The Gallagher system for the indoor pool has been configured to monitor the pool temperature, humidity, chlorine and wind direction. Business rules have been added to deliver appropriate responses, including the determination of whether to engage extractor fans, increase water filtration, or open the windows for passive ventilation.

With complete control over all systems, Command Centre helps to automatically facilitate health and safety protocols within the swimming pool complex. An example of this can be seen in the way in which chlorination is monitored. Should the system detect a high level of chlorine in the water or atmosphere, windows are automatically opened for ventilation, the pump speed is increased to help restore chlorine levels in the water, and the access control system denies entry to the pool area until the monitors identify that the chlorine level has reduced.



In 2014, St Peter's built a new Junior School building and installed the Gallagher solution throughout. This building has been configured to monitor temperature, wind velocity, and rain. Business rules have been added to control lighting, fresh air reticulation, heat recovery, air conditioning, and automated window opening to optimize passive building systems. As a result, St Peter's has experienced exceptionally low energy consumption, making the Junior School the most energy efficient building per square meter on the St Peter's campus.

Academic block electricity consumption per square meter (2014-2015)



Data management

St Peter's has integrated their student database – Synergetic – with Gallagher's Command Centre software management platform, providing a single source of data and one central point of reference. This interface allows St Peter's to create, update and remove individuals and their access groups within Synergetic and this information automatically updates the access control system. This ensures that any updates made in Synergetic are reflected in real-time in the Gallagher system, proving invaluable in terms of time efficiency, administration and reducing the margin for error.

Site security and crisis management

St Peter's has an impeccable reputation for safety and security. Through the Command Centre platform, the school has managed to implement a highly efficient one-touch system to deliver enhanced site security for assistance, critical incidents, and full site lockdown.

Assistance required

Utilizing any computer on site, both staff and students are able to quickly and easily contact the campus security team for assistance including an escort to their car after hours. Controlled by Command Centre an assistance request sends an SMS and email to security personnel identifying through the access control system the name and exact location of the staff member or student.

Critical incidents

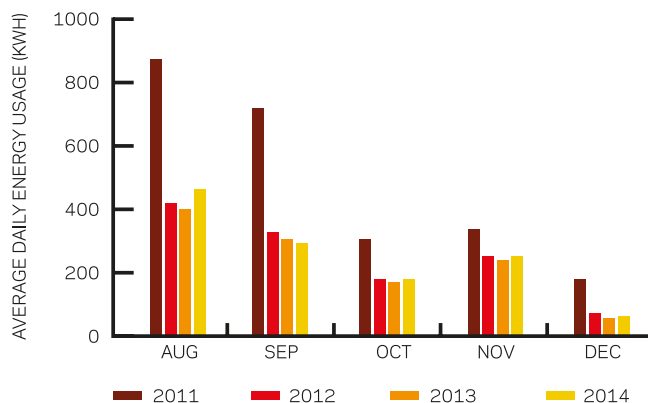
Again utilizing any computer on the campus, a critical incident can be registered in a single, simple, action. The system then alerts the critical incident team (including registered nurses, and staff trained in critical incident stress management) via SMS and email, providing information on the location where the incident has occurred.

Full site lockdown

Selected personnel on site have system permissions to initiate a full site lockdown across the campus. This action can be achieved via any computer on site. Command Centre also sends an immediate notification to local police that the school is in lockdown. Simultaneously, all buildings across the site automatically respond to the lockdown by closing windows, locking doors, and initiating air conditioning to maintain the temperature.

*MIFARE is a registered Trademark of NXP B. V.

School energy consumption drop



Energy savings obtained in the School House building following implementation of the Gallagher system in July 2012.

Future Development

St Peter's is committed to further reducing their carbon footprint through reducing energy use. During 2015, the school invested even further control in their Gallagher system by installing heat recovery units, which will eliminate the need for air conditioning at certain times of the year. "It's about seamless system management," said Gareth. "Because of that control, we've experienced very real energy and cost savings."

Acknowledgments

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