

# Wellington Post Office NEW ZEALAND

C-Bus Control and Management System

*Case Study* <sup>6</sup>



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# Lighting Control in New Zealand's Largest Post Office

*Wellington Post Office is the administrative headquarters of New Zealand Post Properties. Employing some 150 staff, the Post Office outgrew its premises and decided to expand into two levels of unoccupied floor space in the same building. This required an extensive refurbishment including the installation of a new lighting system that could offer independent lighting control with the provision for master control.*

*To meet these needs electrical engineering consultants of Beca Carter Hollings and Ferner specified the C-Bus Control and Management System for its cost effectiveness and superior lighting flexibility.*

## **Independent and Master Area Lighting Control**

Both floors of the Wellington Post Office are 1244sq. metres in size and comprise an open office area, reception area and partitioned offices. This open office area is centrally located on each floor and is surrounded by the partitioned offices.

All lighting is provided by 3 x 36W fluorescent troffer lights (189 fittings per floor) with low loss ballasts and 12 diffusers.

Because the staff arrive at different times and wish to use only the lights for their own area, the lighting engineers stipulated independent switching for each office area.

*Open office area allowed no central position for independent switching.*

Although the open office area was divided into eight separate lighting zones, there was little or no central position to place the individual switches.

The engineers decided to locate C-Bus four gang key pads in the reception area to provide the independent lighting control in the common area while C-Bus single key pads were located in each of the individual offices.

However, the Post Office management also requested a master switch to ensure that no light would remain on inadvertently overnight.

This operation is provided by a C-Bus single gang key pad, which is located in the reception area. This is then programmed to activate or drop out all lights for the entire floor, including the bathroom and toilet areas.



### Minimised Cable Runs

Had the installation been conventionally wired, both floors would have required many runs of expensive mains cabling. But with C-Bus, four channel relays were simply placed inside the ceiling, as close as possible to the load, to further save cabling and provide energy savings.

A single telephone drop of Unshielded Twisted Pair cable was then made to each key pad to perform the required switching functions. No difficulties were encountered during the wiring of the entire system.

Because the installation of the system required less than 100 C-Bus units, both floors could be wired on the one network without the need for any Network Bridges. Therefore, both floors could share the same C-Bus power supplies.

Commissioning of the C-Bus system was very simple requiring less than a day to complete.

### Subsequent Alterations

After the installation was completed, management decided that additional two way switching of the common area was required in the stairwell as the staff quite often take the stairs to travel between both of the floors.

A connection into the existing network and programming of the new C-Bus key pad was all that was necessary. The alteration was completed in less than two hours.

A further advantage of the C-Bus system is that the building manager can change the lighting configuration and add extra units to the system, such as a light level sensor and movement detectors. This will further enhance energy savings and enable maintenance operations on the system at any time without the need to shut the whole system down. This will then eliminate any expensive wiring changes in the future and lead to cost savings and reduced down times in the office.

Both the specifier and the installer were very impressed with the flexibility of C-Bus and with the simplicity with which it can be installed. The system has proven to be reliable and the specifier is looking to use the system for a number of future projects.



*Lighting zones in partitioned offices are independently operated.*

## The Benefits of C-Bus Control

Features	Benefits
Local control of each zone	Independent lighting control
Master Override	Convenient, single point control
Minimised runs of mains cabling	Wiring less expensive than conventional installation
Alterations can be programmed	Minimal rewiring required

## Installation Data

C-Bus Project	Wellington Post Office, NZ Post Headquarters
Clipsal C-Bus Specialist	Paul Morrison
Specifier	Beca Carter Hollings and Ferner
C-Bus Installer	Associated Electrical
C-Bus costs* (approximate)	NZ \$3000
Total Electrical Costs	NZ \$400,000 (Includes 4 floors, 2 C-Bus and 2 conventional with lighting fixtures and labour)



*Master switch will activate or drop out lighting on entire floor.*

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