

# CarePlus™ flexibility stretched to meet new business requirements at Esperance Aged Care Facility

## Executive Summary

### Esperance Aged Care

- Esperance WA
- 70 Beds

### Challenge

- 4 campus
- 9 buildings
- 728 KMs from capital city

### Solution

- CarePlus™ TM
- 3 polling lines on 1 CCM
- 8 NIM's
- 3 NIMs connected to CCM via IP extenders on existing network
- over 400m from CCM

### Results

- Reduced installation cost
- No trenched cables
- Reduced return to site via remote maintenance
- Reliable life safety system with remote support

## Challenge

Esperance Aged Care Facility, situated in Western Australia's Southwest is a nine hour drive from Perth Western Australia. This premier regional residential aged care organization combines high care, low care, dementia care and some independent living units on the Esperance site.

Like other care providers, Esperance Aged Care seeks innovative approaches to make the most of limited government funding. "We are looking to technology to reduce costs and improve reliability," says Max Tink, Chief Engineer, Esperance Aged Care. The company sought collaboration solutions to address the following business challenges:

The Esperance Aged Care Facility (EACF) was originally a multi-dwelling aged care facility consisting of five independent buildings. Each care area, North Wing, West Wing, Stafford, Trentfield and Administration, had different generations of installed legacy equipment depending upon the date they were built. More recently an enclosed pathway system was added to "link" the care areas together to protect staff and residents from inclement weather.

Esperance Aged Care was looking to modernise their nurse call system as the old systems had become unreliable and the cost of on-going maintenance was escalating (Esperance is 728kms from Perth the capital city). Additional resident care and safety was being compromised due to the regular non-availability of the nurse / staff call system and a regular number of false alarms. The following challenges faced Esperance aged care facility;

### Containing costs:

- Esperance did not have a significant budget for a full upgrade program.
- Residence at Esperance were not able to vacate their rooms for longer than a few hours for the upgrade as no spare capacity is available.
- Any upgrade would therefore have to leverage the existing cable infrastructure in each room, shower and wet areas.

### Challenges and technical considerations

A number of technical challenges were faced by ELA in designing a CarePlus™ solution to meet the limited budget of Esperance Aged Care.

- Cable infrastructure was old and some cable runs may need to be upgraded.

- Existing underground cables were inducing false alarms and faults during stormy weather with lightning and associated power surges.
- The upgrade was planned to be “dustless” i.e. the residents would remain in their beds / rooms and any upgrade had to leverage existing infrastructure.
- The number of polling lines would be significant to utilise the existing cable infrastructure.

## Solution

As the first step in its residential care program, Esperance Aged Care replaced the old Sedco control equipment with the backward compatible option available in the new CarePlus™ TM controllers. The oldest system, a Sedco 3000 (circa 1980’s), was installed in half the site.

The controller replacement takes some hours to configure but the change over takes less than sixty seconds. This provided staff with piece of mind that system availability and reliability would be immediately improved and their system was guaranteed to be available on the day of changeover.

Once the controllers had been upgraded to CarePlus™ the individual room controllers had to be upgraded. The CarePlus™ distributor ELA, innovated by designing and manufacturing a cable concentrator device, which enabled a plug and play capability to replace the cable termination to the old Sedco controllers with CarePlus™ NIMs. This upgrade further enhanced system reliability, availability and eliminated the false alarms.

## Technical Solution

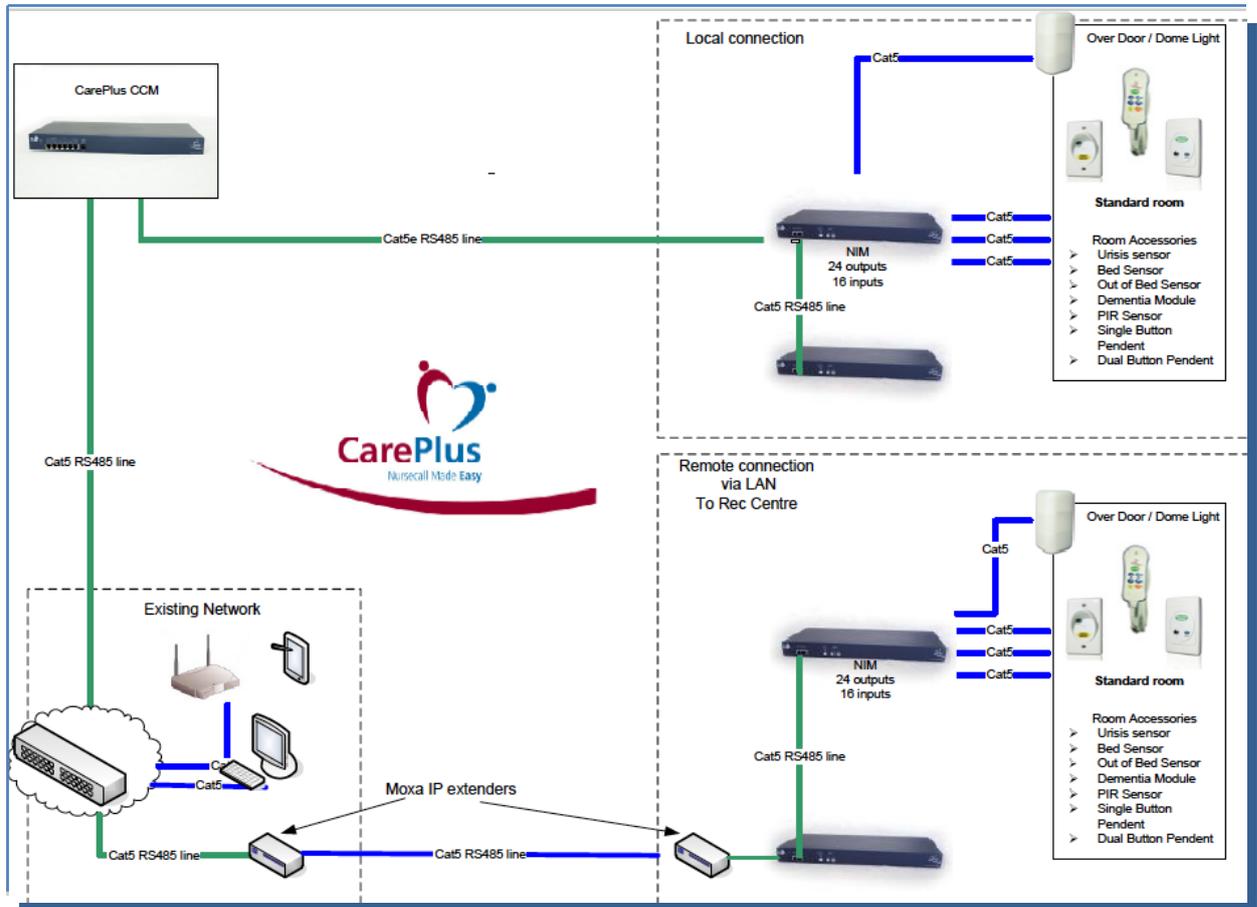
- Deployed CarePlus™ in five buildings (residential aged care and independent living).
- Due to budget pressure from the customer only two CarePlus™ TM CCMs were utilised. Two CCMs had a total of five polling lines. Three on one CarePlus™ CCM and two on the other.
- Deployed NIMs in individual buildings connected via separate polling lines .
- One polling line was connected to the existing IP network to extend the comms line across an open area without having to dig trenches and run underground cables.
- Serial to IP converters were used at each end of the IP network to manage the extended range and conversion to serial inputs on the CarePlus™ CCM (see diagram).

Mr Daryl Hodgson GM at ELA said, *“By utilising and expanding the existing local area network we were able to bypass underground cabling, conduits and trunking. This significantly enhancing system reliability by eliminating induced power fluctuations and saved the project tens of thousands of dollars.”*

### Project cost savings

Mr Darryl Hodgson, General Manager at ELA said, *“Not having to replace underground cable by utilising the IP network saved the customer / project tens of thousands of dollars.”*

## IP Extender Configuration



- Both CarePlus™ CCMs were simultaneously connected to an IP transmitter to ensure timely radio paging to the whole campus.

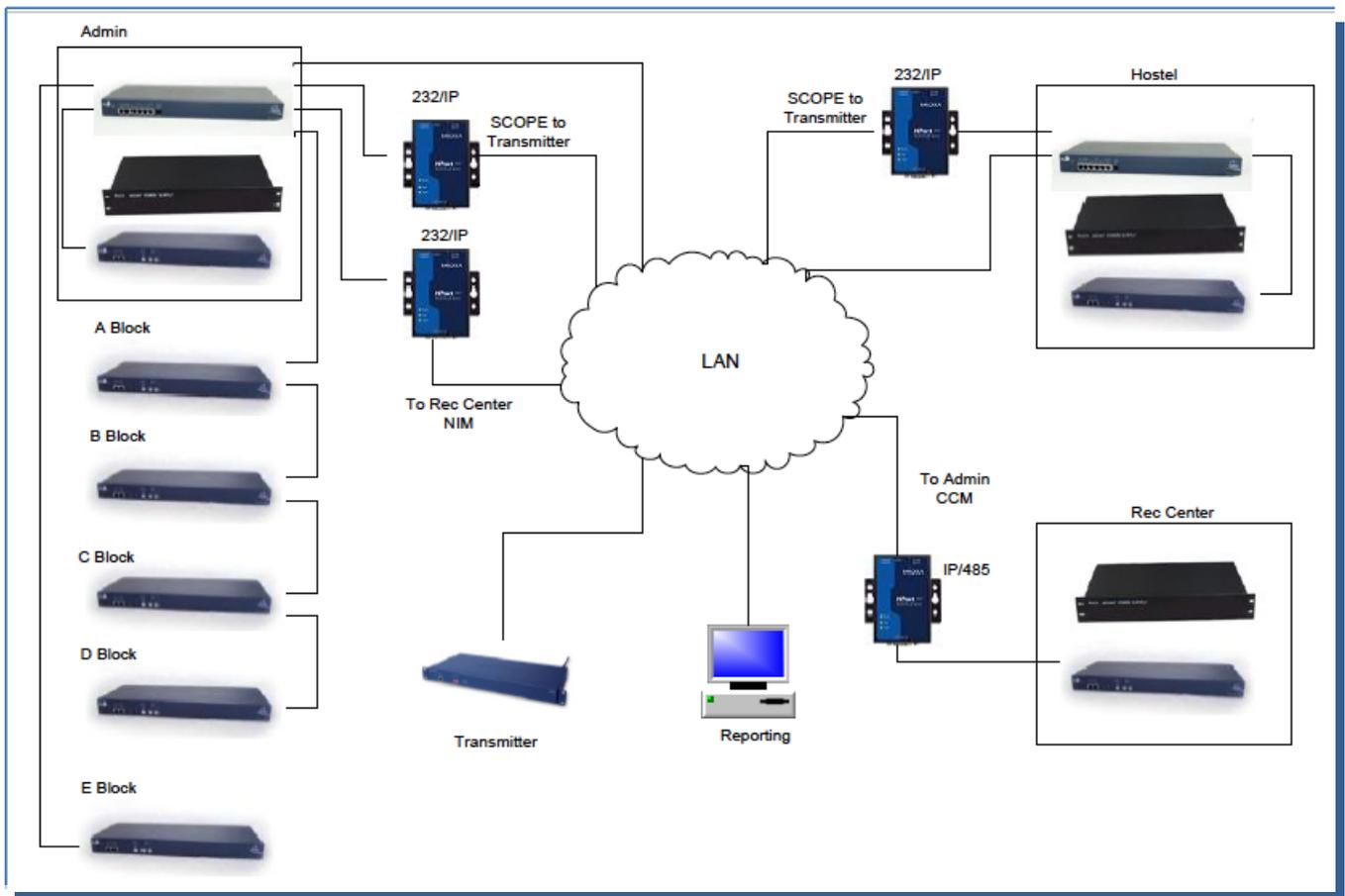
ELA's GM, Darryl Dodgson added *"This technology worked well in queuing simultaneous messages and providing a more robust solution."*

- Supplied an IP transmitter.

ELA's GM added a further insight to IP network integration and said *"By utilising the customers existing IP network to connect CarePlus™ to the IP transmitter this further reduced the need for proprietary cable and labour to cable costs from the project."*

- To ensure the pager tone override functionality worked correctly for different assigned groups – the SCOPE protocol was utilised.
- ELA developed a plug and play wire concentrator for Sedco 3000 / 6000 to punch down connector interface.
- Two staff stations were deployed both stations can view the other station from both points.

## SITE CONFIGURATION



## RESULTS

- Eliminated need for staff retraining:
  - Due to its innovative backward compatibility approach, CarePlus™ can be operated by staff familiar with old legacy systems without retraining.
- Avoided staffing increases by:
  - Improving system reliability and including the ability to conduct remote diagnostics and fault rectification from Perth.
- Significantly reduced false alarms and system faults:

The CarePlus™ system is significantly more reliable and has eliminated the false alarms and faults associated with power fluctuations. *Max Tink the Chief Engineer said "With the CarePlus™ remote maintenance we will save time and money going forward."*

- ELA's CarePlus™ solution provided a reliable life safety system for staff and residents that can be managed over the internet from Perth.