

tech 

The **HEART** of technology in housing

technology enabled care in housing

Fire Safety – Aico Relay Interface

Small 6-month fire safety test of change, funded by tech

Partners East Ayrshire and Stirling

Context:

Unlike the devices prescribed by the [Tolerable Standard](#), Telecare fire and CO detection cannot currently be interlinked within general needs properties.

We tested the assumption that:

Connecting housing provided fire and/carbon monoxide (CO) detection to telecare base units/alarm receiving centres using an Aico relay interface and universal sensors, instead of installing and connecting multiple Telecare specific devices in properties will:

- Improve fire safety by increasing telecare detection within the home
- provide a better user experience i.e. less noise, confusion regarding who to contact if there is an issue with devices
- provide a more cost-effective approach to fire safety than the provision of telecare specific fire and/CO devices



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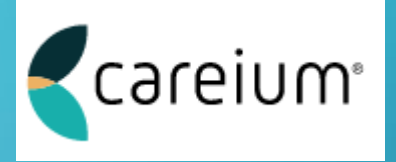
<https://www.techousing.co.uk>

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Clackmannanshire & Stirling
Health & Social Care
Partnership



TEST OF CHANGE

AICO & CAREIUM PILOT PROJECT – STIRLING

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CLACKMANNANSHIRE & STIRLING HEALTH & SOCIAL CARE PARTNERSHIP

OVERVIEW

- Introduction
- Scope and Project Outcomes
- A Way Forward
- Setup
- Testing
- Results
- Benefits
- Next Steps

INTRODUCTION

- The change in guidance from The Scottish Government/Digital Office for Scottish Local Government meant it was now necessary for smoke and heat detectors provided by Telecare services to vulnerable users meet the tolerable standards for fire safety set out by the Scottish Government.
- This requirement was in addition to the homeowners general requirement to provide an interlinked fire safety system. This presented a challenge for our service in that it was very likely we would need to provide a dual system in many cases which would be both confusing and unsatisfactory for the customer. We had to find a better way.

SCOPE AND OUTCOMES

- The project was initiated to test whether our council supplied interlinked Aico smoke and heat detectors could be interfaced successfully with a Telecare Dispersed Alarm Unit (DAU) thereby eliminating the need to provide a dual system.
- £1500 in grant funding was provided by The Scottish Federation of Housing Associations (SFHA) to test the concept. The money was used to purchase equipment and finance the installation.
- A technical solution would be explored and developed with Aico and one of our existing Telecare alarm suppliers.
- The technical solution would be tested regularly within 5 volunteer's homes.
- A paper would detail the findings and proposed way forward for Stirling Council properties.

A WAY FORWARD

- Stirling Council currently use two Telecare alarm suppliers, Careium(Doro) and Legrand(Tynetec). Our technical advisor Dave Richmond from Aico looked at both devices and found that the Careium Care IP model was the one most likely to be successful in part because it had an external input port.
- Dave also identified the Aico Ei428 Relay as the correct piece of equipment to link the devices as it was mains powered with a battery backup and could link with the detectors using RF. This was important as the solution needed to operate even if there was a power cut.
- Gary Clark from Careium provided technical support on their end enabling us to programme the telecare alarm successfully to accept an input from a 3rd party device.
- The project was initiated in August 2022 with the equipment installed in service users homes on the 25th and 26th of August.

PROPOSAL CREATED BY AICO

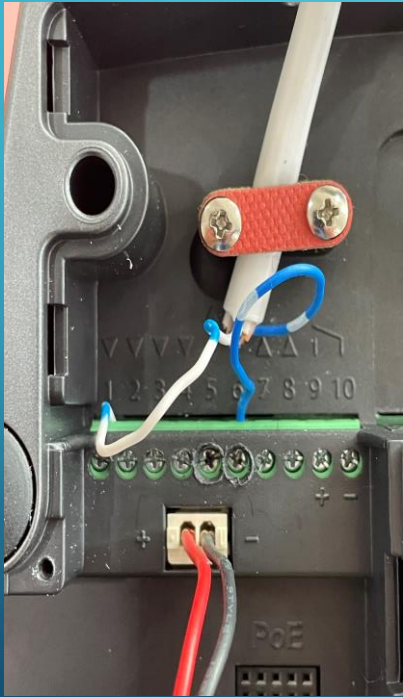


Client Details	Stirling Council – Health & Social Care Partnership (MECS)
System Overview	A fire detection system to a Grade D1 Category LD1. Using 3000 series with a control switch connect via RF interconnection.
Property Type	Flat, Single Storey & Two Storey Properties
System Type	<p>FIRE DETECTION AND ALARM SYSTEM</p> <ul style="list-style-type: none"> - To be carried out in accordance with BS 5839-6:2019 Installation of Fire/ Detection and Alarm Systems in Dwellings. - The system shall be installed with the purpose of providing an appropriate level of protection to occupants. - Grade D1 systems shall be installed within all properties providing that no floor level exceeds 4.5m in height above ground level, and unless otherwise specified. - All systems shall be installed to meet the level of protection afforded by a type LD2 system, unless otherwise specified. - Smoke/ Heat alarms shall be manufactured to satisfy the requirements of BS EN 14804: 2005 and BS 5446: Part 2:2003 respectively.
Level of Protection	<p>Minimum Protection Category</p> <ul style="list-style-type: none"> - LD1
Alarm Power / Back-up	<p>Mains Powered with Lithium Back-up</p> <ul style="list-style-type: none"> - Grade D1 - Alarms are powered from the mains power supply but will automatically switch to Lithium Rechargeable back-up cell if the mains power fails. The Lithium cells will last the life of the alarm (10yrs) and are completely tamperproof.
Alarm Interconnection	<p>Radio-Frequency Interconnection</p> <ul style="list-style-type: none"> - Uses radio frequency (RF) signals to link the alarms instead of having to run cabling between them. - Ei3000MRF Modules fitted to mains powered alarms.
Alarm Types	<p>All alarm types (Smoke and Heat) shall include the following features:</p> <ul style="list-style-type: none"> - Alarms shall be radiofrequency interconnected with Ei3000MRF modules in mains powered alarms.

21/02/2023

SETUP OF EQUIPMENT

Care IP Mobile Unit
to be wired as below



Ei428 to be wired
as below.

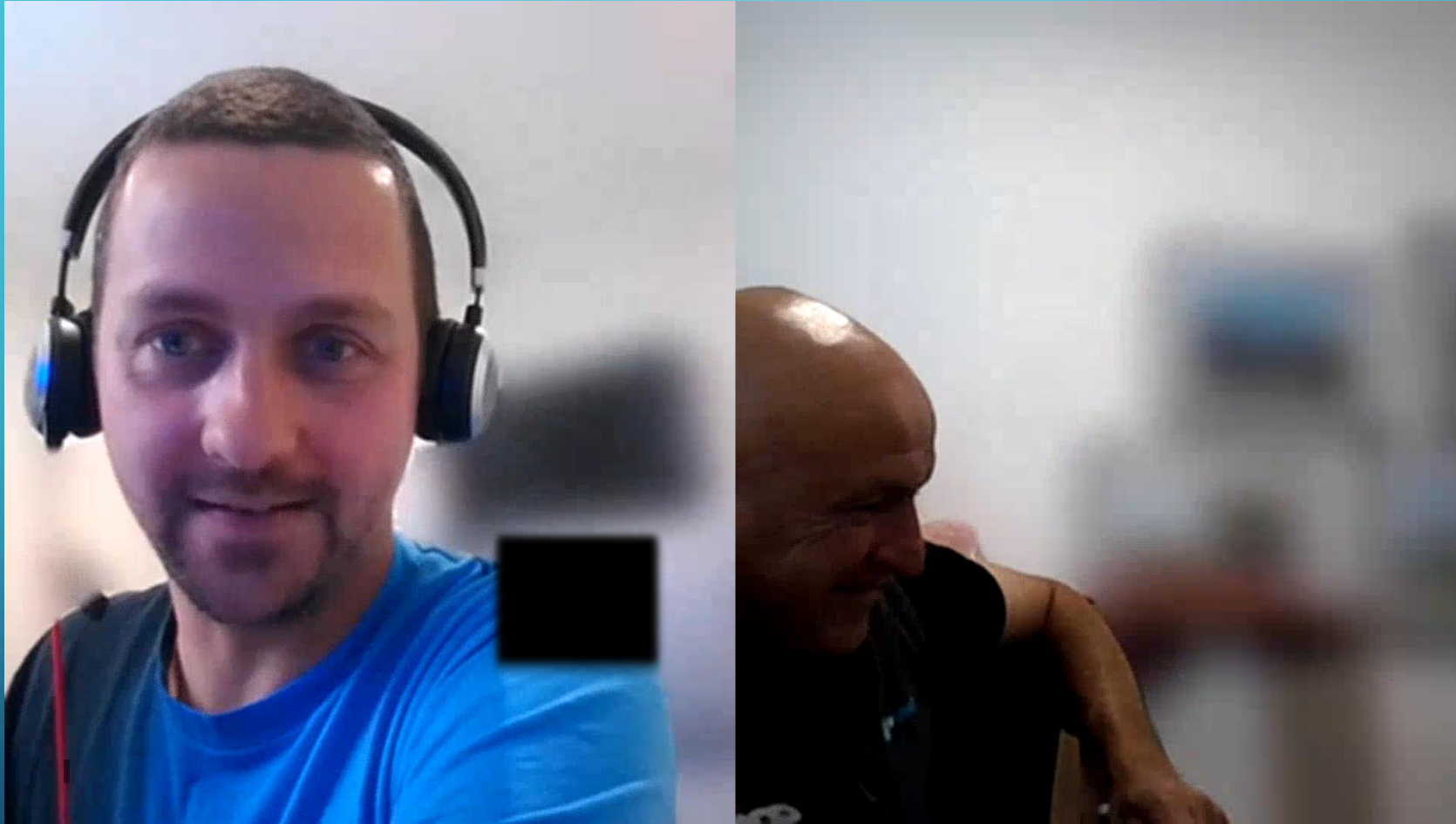


Care IP Unit to be
switched on as below.



On the Ei428 Relay press the House Code button (Red) as per picture above when the LED comes on let go of the button. The LED will now flash.

CAREIUM CARE IP MOBILE CONFIGURATION



TESTING

- Fortnightly manual test of smoke and heats in 5 volunteers homes over a period of 6 months, August 22 to February 22
- Test recorded by MECS responder during visit
- Feedback gathered from service providers on setup
- Test recorded as complete by Alarm Receiving Centre

RESULTS

- 4 out of 5 dispersed alarm setups operated as intended with zero faults
- One alarm recorded faults but after investigation this was found to be unrelated to the project. The DAU was found to have signal problems within the property and was replaced.
- The Test of Change was judged to be successful and it was decided by the wider Analogue to Digital Switchover project board to recommend roll out of this solution to all council properties where MECS was in operation

BENEFITS

- The service user benefits from increased protection by having their already installed interlinked smoke and heat detectors connected to MECS. If a fire alarm activated then the ARC would be alerted. The ARC would then follow their fire safety protocols.
- The service user does not require a dual system avoiding excess noise, clutter and confusion.
- Its clear that when a smoke and heat detector alarms that MECS will be alerted. With a dual system that may not necessarily be the case.
- The cost of the relay and installation is less than the providing a dual system of smoke and heat protection. Financial saving is approximately £20 per service user
- The system going forward will be maintained by the Housing service and tested annually.

NEXT STEPS

- The Programme Manager for the Analogue to Digital Switchover Project will write a paper for Stirling Council's Housing Service which will propose they adopt this solution for all council properties where MECS is currently in operation.
- For all new entrants to MECS a request to install the relay will be passed to technical services within the housing service at point of referral.
- The Reablement and TEC service will carry the budget for this process. The Housing service will order the relay, carry out the installation and then bill the service for the equipment and labour.

CLACKMANNANSHIRE SETUP



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QUESTIONS?