

# Bourne View Care Home, Poole

Bourne View is Colten Care home's new flagship nursing home based on the grounds of the former Dorset Fire Service headquarters in Poole. As part of an independent family-run company with 21 care homes, the 3-storey new build with 'Canopy Café', designed in Art Deco style, offers a relaxed atmosphere and a whole range of facilities such as an in-house salon, spa and laundry room while providing all-around care for its residents. For this reason, a reliable heating and hot water solution was needed.

**Sector:** Care homes

**Building:** New build care home

**Products:** Varmax floor standing boiler, Dorchester DR-FC Evo condensing water heater, Burstock expansion vessel, Clenston air and dirt separator

**Application:** Space heating 382kW, DHW 1,940 l/h l/h

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Principal designer and contractor [Colten Developments](#) employed [local consultants Mabey Francis](#) as M&E designers and contract administrators. [Watertite Heating](#) were appointed as mechanical contractors who procured and installed all mechanical items including the plant.

# Specifying Hamworthy boilers and water heaters in the care home

Mabey Francis specified [Hamworthy Varmax boilers](#) to heat the care home and [Dorchester DR-FC Evo direct fired condensing water heaters](#) to meet the care home's hot water requirements as well as a Chesil pressurisation unit and [Burstock expansion vessel](#) to pressurise the heating system.

Andy Cope, director for Mabey Francis, commented,

"Reliability is by far the most important factor for heating and hot water in a working care home which depends on these essential services. It was imperative that the installation complies in all respects with legionella guidance to ensure a safe environment for the home's future residents. Secondly, a high efficiency heating and hot water plant minimises energy use, reduces carbon emissions, and costs."

The two chosen [Varmax 180 condensing boilers](#) with a gross efficiency of 96% have a [stainless steel heat exchanger](#) with 5-year [warranty](#) at their core and deliver a combined output of up to 382kW. Thanks to a combined turndown of 10:1, they can [modulate down](#) and deliver outputs from as little as 38.2kW, improving efficiencies while delivering a comfortable care home heating temperature.

Andy continued,

"We decided to specify Hamworthy boilers, because we have been designing the M&E services for all of Colten's new build care homes over the last 25 years which have all been completed with Hamworthy commercial boilers. We specified the Varmax based on resilience and life expectancy. Other than this, we find the pull-out step on this model and the integral light fitting to be very practical for [commissioning](#) and servicing the boiler."

Commenting on the care home heating system installation, which was completed by [Watertite Heating](#), Mike Dennett, projects director for the company said,

"The heating design comprises of a gas fired, pumped low pressure hot water system fed from the two Varmax boilers in the plant room, complete with purpose made flue system.

Pipework is mostly run above the ground floor corridor ceilings, with risers and drops to feed various rooms above and below. Pipework in rooms is run generally in screed depth floor ducts, to serve low surface temperature (LST) and steel panel radiators and areas of underfloor heating in communal areas. Automatic controls (including a [Trend Building Management System](#)) and monitoring equipment is installed in the plant room."

The Trend BMS provides weather compensation and boiler sequencing. While the former means the flow temperature in the system is adjusted according to outside temperature to avoid energy wastage, the latter ensures the Varmax boilers run under sequence control, meaning both boilers can operate together at more efficient low fire rather than one at high fire. This also [evens out use across the installation, improving the lifetime of the equipment](#).

## Hot water supply and Legionella protection for care home residents

One of the main concerns in care homes and healthcare facilities are Legionella bacteria. These are present in natural water sources but also man-made water systems, albeit usually in low numbers. Water temperature is a

significant factor in controlling the risk, with optimum conditions for bacterial growth occurring between 20°C and 45°C. While Legionella can cause diseases in everyone, the elderly belong to the high risk group.

Two [Dorchester DR-FC Evo 45 direct fired condensing water heaters](#) with a gross thermal efficiency of 96% deliver a combined continuous output of 1,940 l/h (44°C ΔT) to satisfy the care home's hot water needs. A destratification kit, consisting of a pump, as well as a purpose-made flue system were also installed.

Andy elaborated,

"We [chose separate direct fired water heaters because they allow the heating boilers to directly compensate for heating with no compromise to efficiency upon hot water demand](#). The Dorchester DR-FC Evo model was selected for its condensing technology and proven reliability continuing the long line of Dorchester water heaters we have specified over the years. The destratification kits help with Legionella protection."

Hot water is supplied to the many facilities in the care home that offer all the convenience but also support the necessary care for its inhabitants: hair salon and spa basins, laundry sink and basins, all showers and baths as well as – essential for nursing homes and healthcare facilities - sluice basins.

The water heaters and chosen ancillaries ensure care home residents are protected from Legionella: While the destratification kit distributes sufficiently hot water evenly throughout the vessel to prevent the bacteria from multiplying, [the water heaters include an anti-Legionella function which heats the contained water up to 65°C for an hour to kill any present bacteria](#). This can be set to run automatically for continuous safety.

Poole is based in a hard water area, creating an additional challenge for Colten Care homes. As prevention is better than cure, a water softener has been installed. This protects the equipment from scale deposits which affect the efficiency of equipment and can lead to its breakdown. Furthermore, deposits also pose a health risk: they can create areas where water stagnates and Legionella bacteria multiply rapidly.

## A modern, comfortable building for elderly residents

Apart from the heating and hot water system, extract ventilation systems and specialist ventilation systems have also been installed, along with modern comfort cooling systems in several (mainly communal) areas. This setup ensures residents stay comfortable. The plant room with the heating and hot water equipment is located on the ground floor for easy accessibility.

On the project, Mike Dennett reflected,

"Colten have always allowed reasonable space for the plant room. The principals of the company understand the importance of allowing enough room to install and maintain the heating and hot water generating plant. As a company, [Watertite Heating](#) are very proud of the standard of our mechanical installation both within the plant room and throughout the entire building. We believe the Art Deco design and attention to detail in decorating and dressing the home really do make this latest edition to the [Colten](#) portfolio a true flagship for their brand.

The support I receive from Hamworthy's area sales manager is always excellent. [Data sheets and brochures](#) are also easy to download, making forward planning easier. Lastly, delivery dates were agreed in advance and adhered to."

Andy Cope commented,

"As a practice, we have been specifying Hamworthy products for over 40 years. They are based locally to our offices and have provided us with [excellent technical support and after-sales service.](#)"

Steven Pinder, site manager for [Colten Developments](#) who worked with Watertite Heating and Mabey Francis on the project, concluded,

"We at Coltens are pleased as a local business ourselves to be using another local company who have proved more than capable of providing an excellent product with an excellent service.

This installation joins the other 20 nursing/residential homes all of a similar size in the Colten group that have been completed using Hamworthy products. The whole installation has gone smoothly without problems and [we're very happy with the result.](#)"





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