



case study

Carina & Gemini

The Carina and Gemini buildings in the Central area of Milton Keynes were built in the late 1960's in the first wave of building work for the New Town. The buildings were in need of refurbishment. 25% of Carina and 75% of Gemini were occupied. CBS were contracted to refurbish the heating and air conditioning in the unoccupied areas whilst keeping the occupied areas running. In total, there was 2160m² of office space to refurbish.

By specifying the latest Mitsubishi VRF equipment, the new system will allow prospective tenants to keep the office space as open plan or divide it into smaller offices.

In keeping with the Milton Keynes tradition, the areas directly around the condensing units are landscaped with heavy, mature planting to reduce the visual impact of the fifteen condensing units that were needed to service the new buildings.

CBS were contracted to carry out a full demolition of the inside of the building, removing existing pipework, electrical cabling and the heating system from the ceiling

voids. Ten forty foot roll-on roll-off skips were filled with rubbish and another three of the same size were filled with scrap metal. This demolition work cleared the way for CBS and the other trades to begin the new installation work.

The new VRF system was designed to allow each quarter section of the building to be controlled independently. Each section has it's own dry riser cupboard for electrics and room controls and a wet riser cupboard for refrigeration pipework.

The environmental control is via a G50 Centralised Controller and each fan coil unit associated with it can be controlled independently from a touch screen.

Each quarter of the building has it's own Branch Controller which feeds four fan coil units. The conditioned air is positively ducted into four way diffusers from each fan coil unit. The ceiling void acts as the return air plenum.

Fresh air is an important part of the system, the design utilizes 9 Lossnay heat recovery fresh air systems. There is one fresh air heat exchanger for each quarter of the floor space.

Fresh air is fed into the return side of the fan coil units.

One key element of the system design is the ability to use "soft drawn" copper pipe for the majority of the installation inside of the buildings. Dave Boshier, Managing Director of CBS "A system design incorporating soft drawn copper pipe is a real benefit for us as the installer and for the client as it means that installations will proceed at a much higher rate. There is no brazing involved, all of the joints have flared connections. We have pipe runs of over 15 meters with no joins. This really minimises the risk of refrigerant leaks."

Milton Keynes

In the 1960's the government identified an area of North Buckinghamshire as a possible site for a large new town. The New Town encompassed the existing towns of Bletchley, Stony Stratford and Wolverton. The New Town took its name from the village of Milton Keynes located on the site. In 1967 building began and the New Town of Milton Keynes was born. The population is currently around 275,000.



**Leak checking/
sanitising the
condensate lines prior
to commissioning**



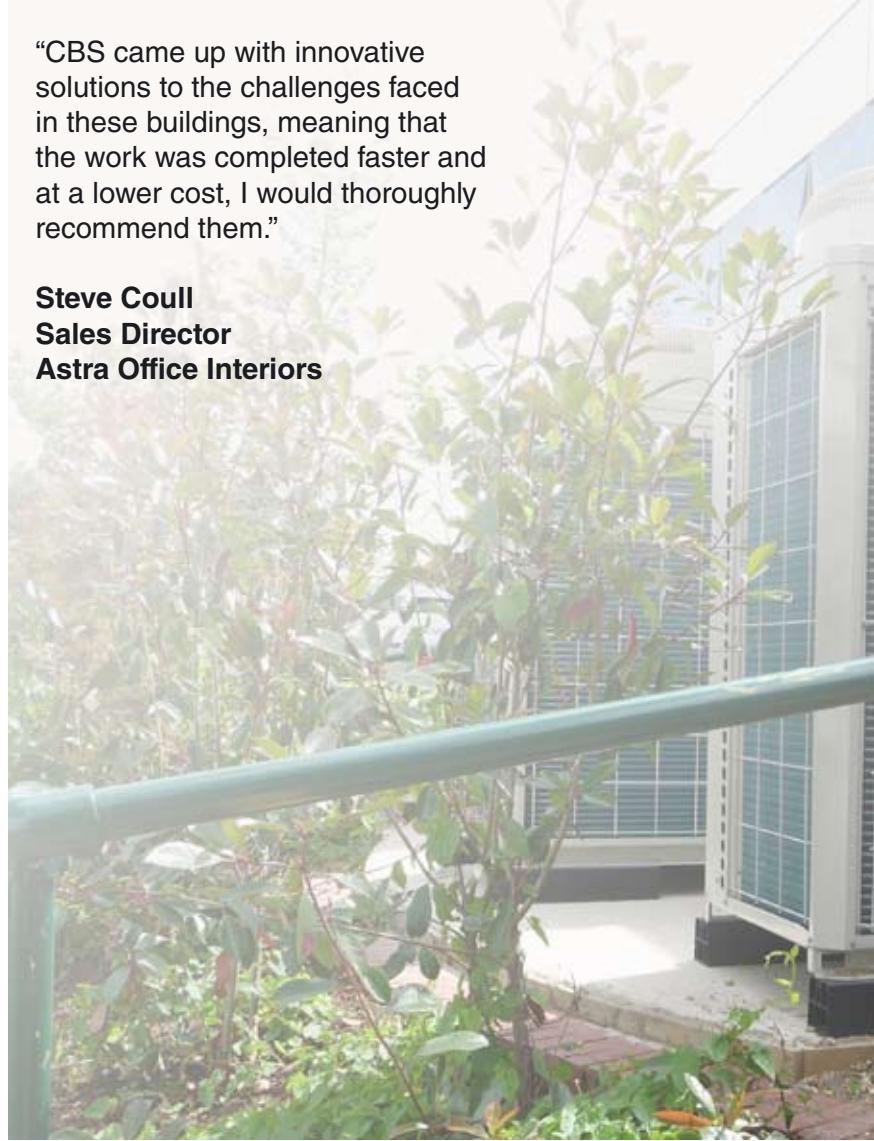
**A unit being
commissioned and the
louvers being put back
in place**



**One of the three
condenser enclosures
for the building**

“CBS came up with innovative solutions to the challenges faced in these buildings, meaning that the work was completed faster and at a lower cost, I would thoroughly recommend them.”

**Steve Coull
Sales Director
Astra Office Interiors**



Local.
Dependable.
Professional.

Comfort Building Services are based in Basingstoke and operate within a radius of approximately 100 miles. CBS employ a crew of engineers who’s combined skills cover all areas of building services.

Investors in People

Active participants of the Investors in People programme and with the policy of developing their own engineers CBS operate an apprentice-training programme in conjunction with the local colleges.

Gas Safe, HVCA, NICEIC

In accordance with the requirements of their trades CBS engineers hold the relevant professional qualifications.

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Project Data

Category	Installation
Description	Replacement of the entire heating, ventilation & air conditioning system during a complete refit
Timescale	4 Months
Value	£500,000 - 750,000

Services

- Decommissioning
- Equipment Installation
- Commissioning
- Landscaping condenser enclosures

