



PROJECT CASE STUDY

VICTORIA HOSPITAL, DEAL

An HTM-03.01 2021 AHU for Deal & Walmer Victoria Memorial Hospital

Opened to the public in 1924, Victoria Hospital in Deal, Kent was originally built as a memorial hospital to recognise the loss of life during the First World War. The 22-bed inpatient unit provides a rehabilitation and intermediate care hospital for the local community.

AirCraft Air Handling were approached by Kent Community Health NHS Trust to undertake a survey and produce a condition report, relating to Victoria Hospital's AHU which serves the general areas of the Hospital. Unfortunately and as expected, the 30+-year-old AHU was found to be in poor condition and did not comply with the current HTM-03.01 standards. Due to the AHU's age and configuration, it could not be upgraded to meet the current efficiencies required by the NHS. As a result, we recommended that the failing AHU should be replaced with a fully compliant HTM-03.01 2021 unit.

Due to limited access, size of the Hospital's internal plant room and connectivity to the existing ducting and pipework, we worked closely with the Trust's M&E contractor to ensure the project went smoothly. This required the Trust's

mechanical consulting engineer to draw up the technical specification for the unit, prior to its manufacture.

To assist with this, one of the AirCraft Air Handling team had detailed on-site discussions with the M&E contractor to ensure ease of duct reconnections and pipework positions. An additional problem that needed careful planning was access to the internal plant room. This was via a door opening that was 2.5mtrs high and only 750mm wide. As a result, the entire AHU was designed to be easily disassembled into component form which, in turn, could be delivered on pallets.

The AHU was manufactured, disassembled and delivered to the site to be reassembled. After carefully carrying the components up to the plant room, assembly was completed in just 2 days. The fully assembled unit is 7.2mtrs long x 2.0mtrs wide x 2.5mtrs high, delivering 2.5m³/s supply and extract. In conjunction with heating coils and plate heat exchanger, high-efficiency EC plug fans and reverse cycle heat pumps complemented the energy savings, helping to make this new AHU fully compliant with HTM-03.01 2021.

The above is a typical project undertaken by AirCraft Air Handling which specialises in site build of compliant HTM-03.01 2021 AHUs. The current delivery period from order and completion of on-site assembly of this type of AHU is approximately 8-10 weeks.