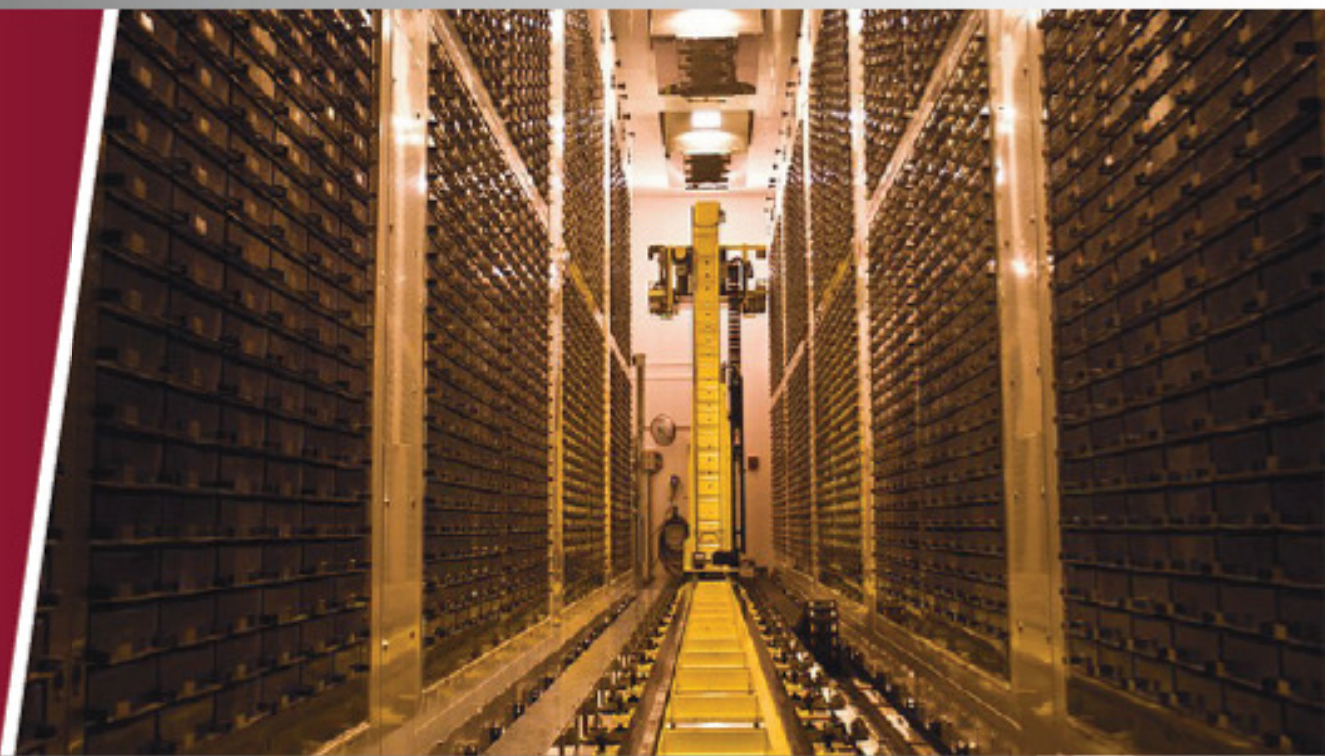


UK Biorepository - Milton Keynes

UK Biobank is a major national health resource, established with the aim of improving the prevention, diagnosis and treatment of a wide range of rare illnesses. Over many years, this has built into a powerful resource to help scientists discover why some people develop particular diseases and others do not.

The Biobank Repository UK enhanced and expanded their existing DNA storage facility to a larger site located in Milton Keynes. The new site was formally Hewlett Packard's purpose-built cheque-cashing centre. ACTS was commissioned to produce the M&E design to suit the new use of the site. A highly resilient services & electrical supply infrastructure was developed which included generator back-up, UPS and harmonic filtering of the supply. The existing infrastructure was employed as the first line of defence to ensure that the 50,000 DNA samples would be secure within the ultra-low-temperature storage system. In addition, there was the formation of a number of process laboratories, which also needed to be power resilient to protect samples and equipment.

Healthcare



Throughout the building, all equipment was protected by a large scale INERGEN fire suppression system. The existing VESDA fire sensing apparatus was retained and modified to suit the building's new configuration. This offered the earliest detection and auto-extinguishing techniques which were a critical requirement on this project.

Several of the laboratories required clinical standard mechanical services, which included low velocity air delivery, comfort cooling, fume extraction, compressed air, vacuum and ultra pure water distribution.

The new facility has the potential to revolutionise the process and storage of DNA samples for research programmes. Millions of human samples, both legacy and future, will be stored in a secure facility which will also undertake next generation DNA sequencing of samples.