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**CASE STUDY**

# King’s College London

## Gene Therapy Vector Facility

King’s College London (KCL) is one of the most established and respected universities in the world, with more than 33,000 students regularly undertaking studies from over 190 countries. At the heart of its operation is the Rayne Institute, a specialist medical research facility that supports industry advancement.

Working closely with the scientific community, it houses the Gene Therapy Vector Facility (GTVF), which enables the delivery of the latest gene therapies into clinical production.

Seeking to enhance and maintain its position at the forefront of medical and scientific discovery, KCL embarked on a £5.8m expansion programme.

The project was procured via the NHS Shared Business Services' Construction Consultancy Services 2 framework (SBS/17/NH/PZR/9256).

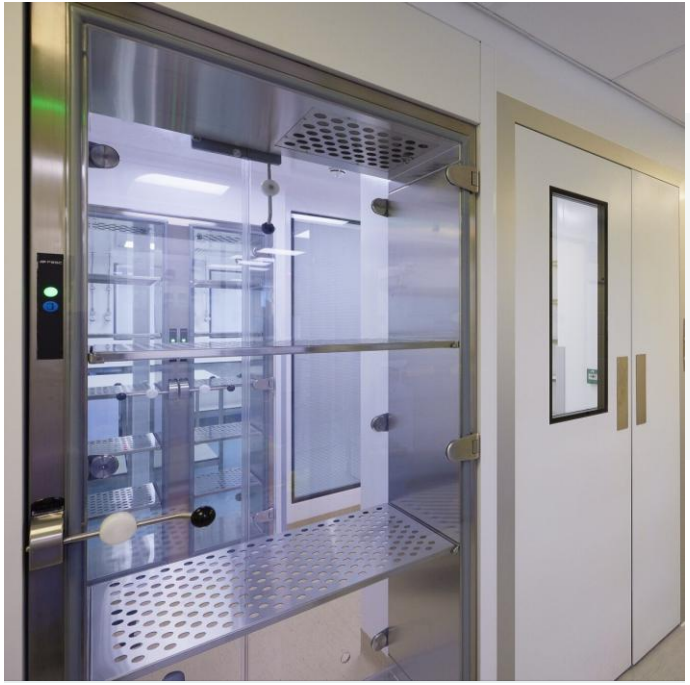
**THE CHALLENGE**

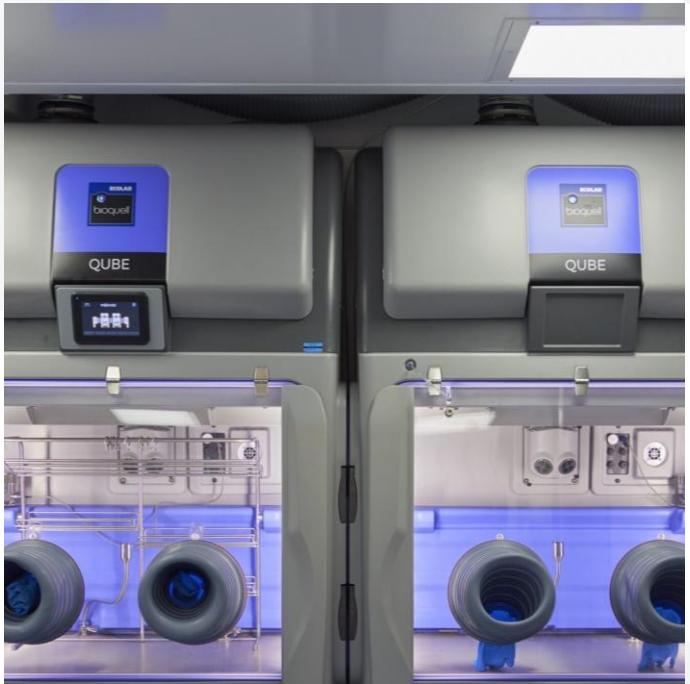
## Improving cohesion and integration

A key part the GTVF's mission was to get projects into production at a greater pace of change, meaning it would need greater cohesion and integration of its teams and services in its current space, which has origins dating back to 2006. The project operated across a 140 square metre space and was supported through funding from King's College London and the European Regional Development Fund (ERDF), designed to encourage economic development and growth.

Pick Everard managed the project and provided design services including architecture, building services engineering and structural engineering. Sustainability and a green design was core to the project, with the facility targeting a BREEAM 'Very Good' rating.

Furthermore, any loss of power stemming from construction work could be hugely impactful to the critical scientific and medical work taking place. With this in mind, backup solutions and 'worst-case' scenario measures had to be accounted for, with solutions in place as part of a three-week lookahead programme that was verified with each project party, including the client.





**THE SOLUTION**

## Minimising adverse impact

A new micro laboratory was created, used for routine environmental monitoring activities and assessment of incoming microbiological media. Two laboratories on the second floor of the Rayne Institute were also fully stripped and fitted out in order to create two Grade C clean rooms to support suites that manufacture viral vectors.

The project also included the consolidation of existing storage areas into one functioning suite, with a refurbishment changing area extended to accommodate the facility's enhanced service capabilities. To achieve Grade C status, the installation of a new air handling unit to support filtration and humidity in the medical environments was necessary.

A key part of Pick Everard's services also included regular assessment of the impact of its work within a live environment. A temporary scaffold was created to allow careful access for the contractor that was separate to staff access, while noise impact reports were also a key part of preparatory work. Construction work, such as drilling, required careful coordination with everyday operations at the facility to minimise disruption.

Operational qualification work, including testing of Building Management Systems (BMS) and other installed services, was also undertaken by Pick Everard ahead of project completion.

**THE RESULT**

## The GTVF is now one of the largest suppliers of GMP-grade viral vectors for clinical trials across Europe

Offering lentiviral, retroviral and soon adeno-associated viral vector services. It can support academic and commercial clients via a team of 50 specialists, with a focus on early-stage clinical activity.

Specifically, the GTVF now has four active, fully equipped production cleanrooms offering significant lab space. The GTVF is able to service a high volume of client projects, increasing the rate of production.

**Get in touch: NHS-SBS@PickEverard.co.uk**

> Excellence in this important field of biomedicine will in the long term deliver both health and economic benefits for the UK and beyond. Operational qualification work, including testing of Building Management Systems (BMS) and other installed services, were also undertaken by Pick Everard ahead of project completion."

**Simon Howell**
Professor
King's College London