

BIOLOGICAL CONTAINMENT FACILITIES: LESSONS LEARNT FROM THE PLOWRIGHT BUILDING

Institution of
**MECHANICAL
ENGINEERS**

8 February 2018
One Birdcage Walk

PRESENTED BY:

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Lecture
Process Industries Division

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DUE TO THE INCREASE OF DRUG MANUFACTURING USING HIGH POTENT ACTIVE PHARMACEUTICAL INGREDIENTS (HPAPIS), THERE IS A GREATER NEED FOR HIGH POTENCY HANDLING CAPABILITIES, PARTICULARLY HIGH-CONTAINMENT MANUFACTURING FACILITIES. ATTEND TO HEAR FROM THIS AWARD-WINNING HIGH CONTAINMENT FACILITY TO GAIN BEST PRACTICE IN DESIGNING AND OPERATING YOUR OWN FACILITY.

Presentation 1:

Case study - The Plowright Building biological high-containment laboratory facility, Pirbright Institute

The "Plowright Building" is the BBSRC National Centre for Virology, a £135M high-containment (SAPO4/ACDP3) facility which provides a unique national capability for the UK to undertake diagnosis of and research into exotic viral pathogens and zoonotic agents.

The building has already won a "British Construction Industry" award, a "Construction News" award, two "CIRIA" environmental awards and its features include:

- Highly complex mechanical engineering and electrical systems
- External windows in every containment laboratory, allowing natural light onto the bench
- A canteen and social interaction area inside the containment zone

To achieve operation a large-scale change programme had to be executed, including:

- Physical layouts that enable more collaborative approaches
- Considerable sharing of equipment and space
- Rationalisation programme for biological samples storage

This facility forms the first part of a larger scale £300M development programme for the Pirbright Institute campus including further high containment veterinary research facilities in accordance with the site Master Plan. A big change programme like this does not occur overnight and required the great efforts of a large dedicated team. This presentation will provide an overview of what it takes to design, build, commission, occupy and successfully operate such a high-containment facility.

Presentation 2

Engineering of critical building services systems for high-containment facilities

High containment facilities require licensed status to undertake scientific work safely within their respective highly regulated environment, where either pathogenic materials or hazardous chemicals are utilised in every day operations.

The engineering design and construction of the building services and critical systems for planned high-containment environments requires rigorous analysis of requirements, proper planning, attention to detail and a thorough systematic approach ensuring nothing is left to chance. Also, a whole life view of the project must be taken to achieve regulatory compliance which enables licenced status to be achieved at start-up and then maintained over the facility's life time.

This presentation will explore the requirements for providing continuous, robust and fail-safe containment performance to make sure that the hazardous materials handled within the facility environments, remain contained.

For more information about our speakers please visit event's website.

PROGRAMME

- 17:30** Registration
- 18:00** Lecture begins
- 19:00** Q&A session
- 19:30** Lecture ends

ANOTHER EVENT TO LOOK FOR:

BULK HANDLING FOR LARGE INFRASTRUCTURE PROJECTS

28 February 2018, London

Attend this event to hear lessons learned from bulk materials handling experts from ongoing infrastructure projects for application in your own projects.

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