

# Supporting NHS Scotland during Covid-19

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With the pandemic in its early stages The Institute of Occupational Medicine (IOM) was brought in by NHS Scotland to ensure the NHS Louisa Jordan had safe ventilation systems in place, to protect patients and staff and limiting the spread of COVID-19 infection within the facility. Due to the nature of the build, IOM had to react fast to an imminent need and surpassed expectations.

## WHAT WAS THE CLIENT'S PROBLEM?

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The UK was entering the start of the outbreak of the coronavirus pandemic, with cases surging and hospital admissions rising. The government made the decision to build field hospitals in response to the potential risk of hospitals becoming overrun as a result of the growing number of cases occurring.

The Scottish Government chose the Scottish Events Campus (SEC) in Glasgow to build NHS Louisa Jordan which was designed to house 1,036 beds to support the pandemic response, costing around £28m. The build was to take no longer than 3 weeks, which was a monumental task.

IOM's expert, Jerry Slann, was appointed as the authorising engineer (ventilation) for the build stage of the field hospital. IOM's task was to ensure the ventilation plant was fit for purpose with staff and patients being kept safe.

The first part of this was investigating the existing ventilation plant to understand:

- What ventilation plant was installed at the site
- Of the existing plant; what was operational, what condition it was in and what could be utilised
- What the performance levels of current plant were
- What additional parts and ventilation plants were required
- Which parts of the current plant could be repaired and brought back into service
- What work would be required to make the entire ventilation system compliant to Scottish Health Technical Memorandum (SHTM) 03-01

## HOW DID WE SOLVE IT?

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With only 3 weeks to carry out the task, Authorising Engineer (Jerry Slann) and Authorised Person (Craig Noble) worked quickly and efficiently to carry out inspections across the full site. Working closely with NHS Scotland as well as the design and build team, they helped develop a ventilation strategy, directing and overseeing the build to ensure required

ventilation levels and standards were being met.

IOM's investigation revealed that the existing exhibition centre ventilation systems needed substantial work to suit their new function of ventilating a healthcare facility.

This work was carried out during the challenging constraints of national lockdown.

IOM working with several mechanical and electrical designers to create and implement a pressure cascade throughout the building by ensuring suitable air flow in each of the critical and non-critical areas, so that it could operate safely with COVID-19 positive patients present. Ventilation systems were implemented which would



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protect both staff and patients in compliance with Scottish Health Technical Memorandum 03-01.

Air samples were taken and sent to the IOM laboratory where the results confirmed that the ventilation plant would create an environment that would meet the exacting standards this facility was going to be held to and required by SHTM 03-01.

In order to help the NHS estates team to maintain the ventilation systems efficiently within NHS Louisa Jordan, IOM worked in conjunction with specialist contractors to enhance the existing building management system. This created an improved user interface with the ventilation systems and a visual dashboard was created to allow alarms to be identified and ensure issues were resolved quickly and effectively.

#### WHAT DID THIS MEAN FOR THE CLIENT?

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NHS Scotland and the Scottish Government received the NHS Louisa Jordan, a temporary hospital, built to the same standard as any NHS Scotland hospital that was fully ventilated and safe for both staff and patients. Ready to support in the fight against COVID-19 as and when required.

#### CLIENT FEEDBACK

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Post contract completion, NHS Health Facilities Scotland appointed both our authorising engineer and appointed person for ventilation during the operational stage of the hospital. This allowed IOM to offer ongoing support as required. These roles exist in every hospital and are required to ensure

that all ventilation systems are maintained and are fully compliant at all times.

Following the success of the NHS Louisa Jordan project, NHS Scotland also appointed Jerry Slann as the authorising engineer for ventilation during the build stages of three regional COVID-19 test laboratories in Glasgow, Aberdeen and Edinburgh.

#### WHAT DID THIS MEAN FOR BROADER SOCIETY?

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Although the facility was thankfully not required to treat patients suffering from COVID-19, it was operational and ready for use any time between April 2020 and April 2021, ensuring NHS Scotland could deal with any surges in COVID-19 cases without overwhelming hospitals.

The NHS Louisa Jordan site was also utilised between July 2020 and April 2021 to undertake outpatient appointments, training of staff and COVID-19 vaccinations, being one of the largest vaccination hubs in Europe. This has been a huge boost to NHS Scotland, enabling them to tackle the backlog of routine appointments, train additional staff to deal with the increased workload placed on NHS Scotland and a substantial vaccine roll out.

#### HOW DOES THIS FIT WITH IOM'S PURPOSE OF MAKING THE WORLD A HEALTHIER AND SAFER PLACE

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To be chosen to assist NHS Scotland through the worst pandemic in our lifetime, is a fantastic privilege and is very much in line with IOM's purpose

of making the world a healthier and safer place. To be called on to help the NHS and to assist in the improvement of the unseen health issues motivates us organisationally as we are able to benefit broader society with our actions.

IOM has been instrumental in the fight against COVID-19 with our researchers also carrying out vital work by exploring how infection is passed inside hospitals and what can be done to mitigate this as well as evaluating the risk factors for COVID-19 in workplaces. Our ability to carry out airborne COVID-19 virus sampling has supported this research.

IOM continues this great work, delivering safe facilities for patients and staff in hospitals across the UK.

#### STATISTICS

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The NHS Louisa Jordan hospital has carried out more than 32,000 healthcare appointments, trained over 6,900 healthcare staff and students and by July 2021, it is anticipated that the site will have provided over 400,000 vaccines to members of the public as well as health and social care staff.

IOM's involvement was to ensure that ventilation standards would be maintained throughout the project. If you need help with maintaining your ventilation standards get in touch with Jerry Slann.



**Jerry Slann**  
Director of  
Authorising  
Engineers

#### EXPLORE MORE...

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