

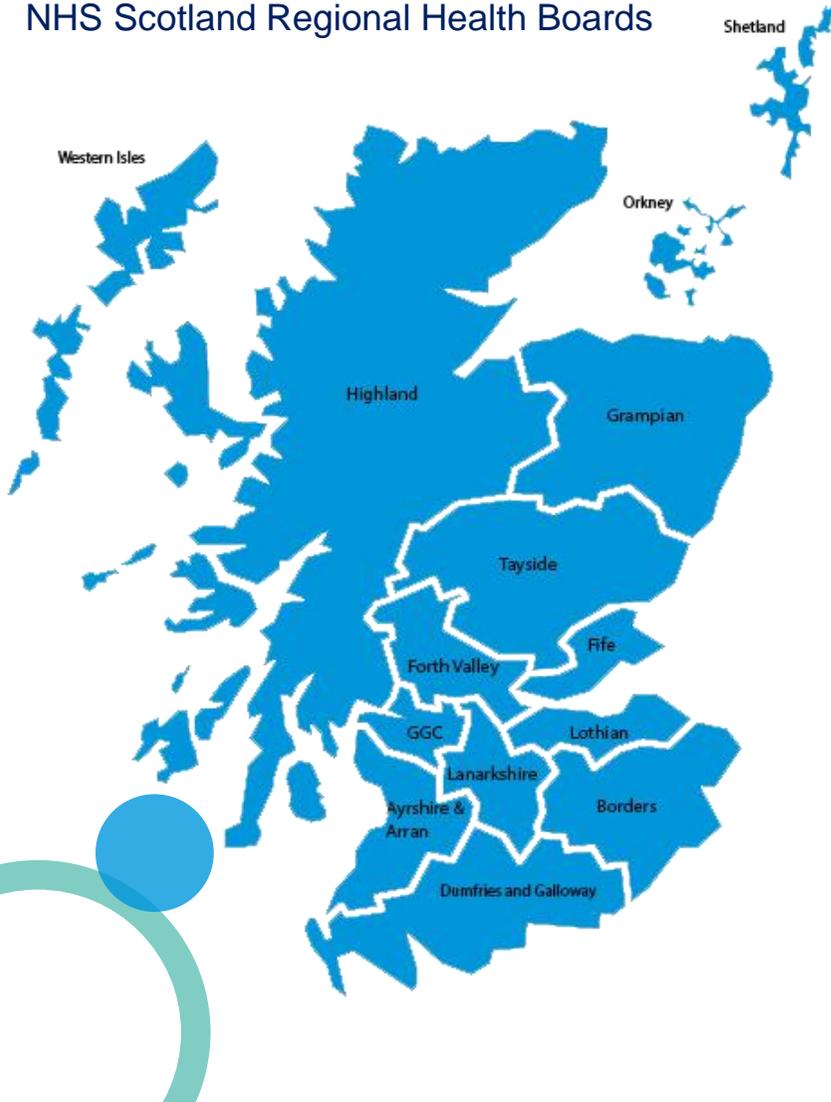
# COVID-19 health facilities initial response: *a view from* NHS Scotland



**Michael Cassells**  
NHS Health Facilities Scotland

**Susan Grant**  
NHS Health Facilities Scotland

## NHS Scotland Regional Health Boards



Scottish context is that the response was managed both locally and nationally.



Local responses were by the 14 NHS Scotland Regional Health Boards under guidance and directives from Scottish Government.

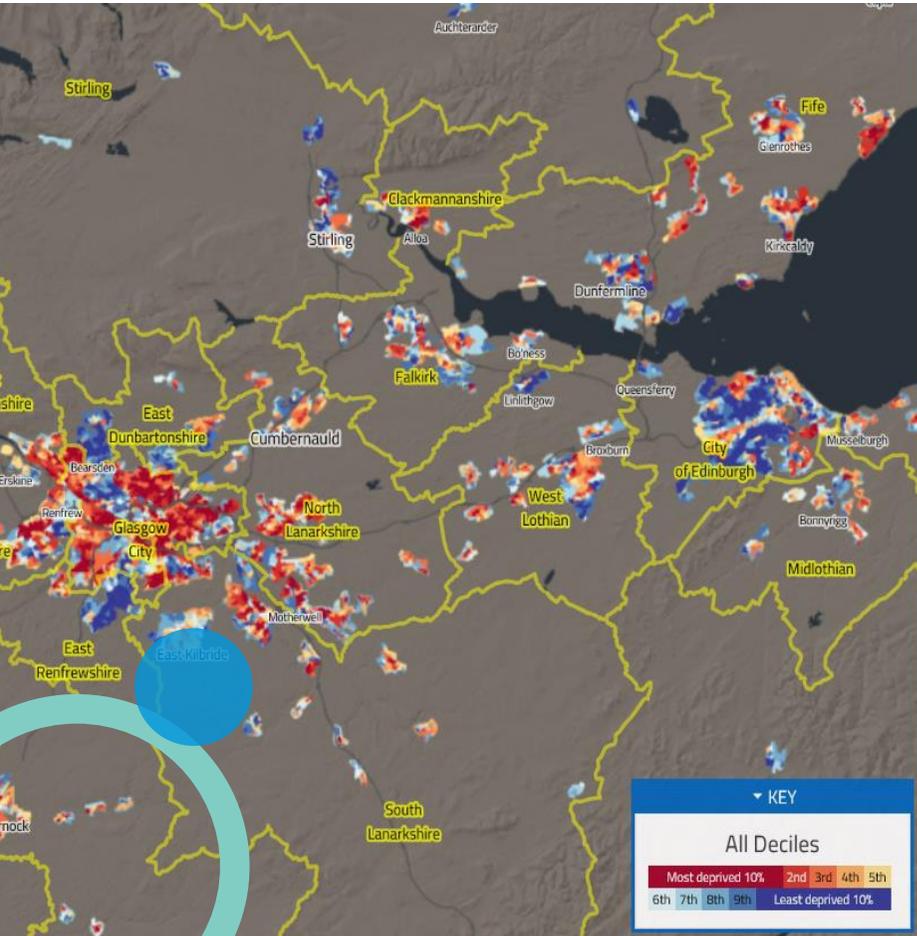
All steps taken locally were with a view to reduce spread of the virus and keep beds free to treat coronavirus patients. These steps included:

- Delay elective surgeries
- Pause majority of out-patient clinics
- Pause cancer care for high risk patients

Impact on bed numbers as follows:

- ICU bed increase from 190 to 600
- 3000 ring fenced beds to treat coronavirus patients

## Why Glasgow?



National response was led by NHS National Services under guidance and directives from Scottish Government.

National response and provision of extra beds requested due to potential for the safety valve on local measures to break.

Potential shortfall based on:

- Rate of infection before mitigation measures introduced
- Rate of infection post introduction of mitigation measures
- Varying rates of compliance with social distancing measures.

Based on these criteria, calculations were carried out and identified an additional 1000 beds would provide the capacity needed.

NHS National Services

Louisa Jordan Hospital – Scottish Event Campus



Planning & Strategy to provide a 1000 bed hospital:

- 1000 beds
- Patient drop off
- Secure and monitored staff access & hospital entrance
- Ambulance stations
- Mobile CT
- Staff & patient welfare and catering provision
- Provision of specialist services – oxygen & medical air
- Utility services
- Access routes

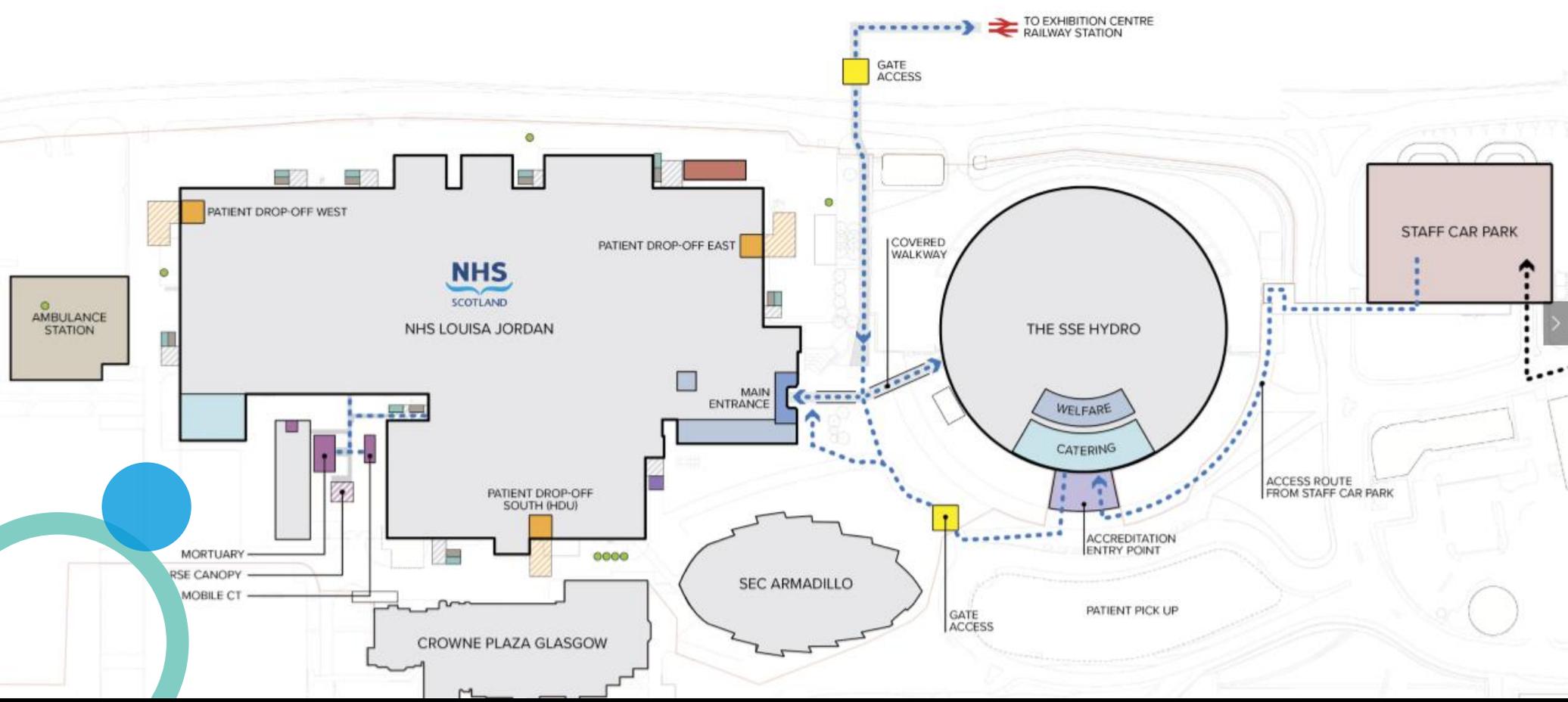


# NHS National Services Louisa Jordan Hospital



**KEY**

SITE BOUNDARY	STAFF CAR PARK	ACCREDITATION ENTRY POINT	PATIENT DROP-OFF	SHOWERS	TENT LOBBIES
PEDESTRIAN ROUTE	CATERING	WELFARE	DSR	AMBULANCE TENT	AMBULANCE STATION
CAR PARK ENTRY	ACCESS GATE	HOSPITAL ENTRANCE	DIRTY UTILITY	VIE PLANT	CLINICAL SERVICES
OXYGEN STORAGE					

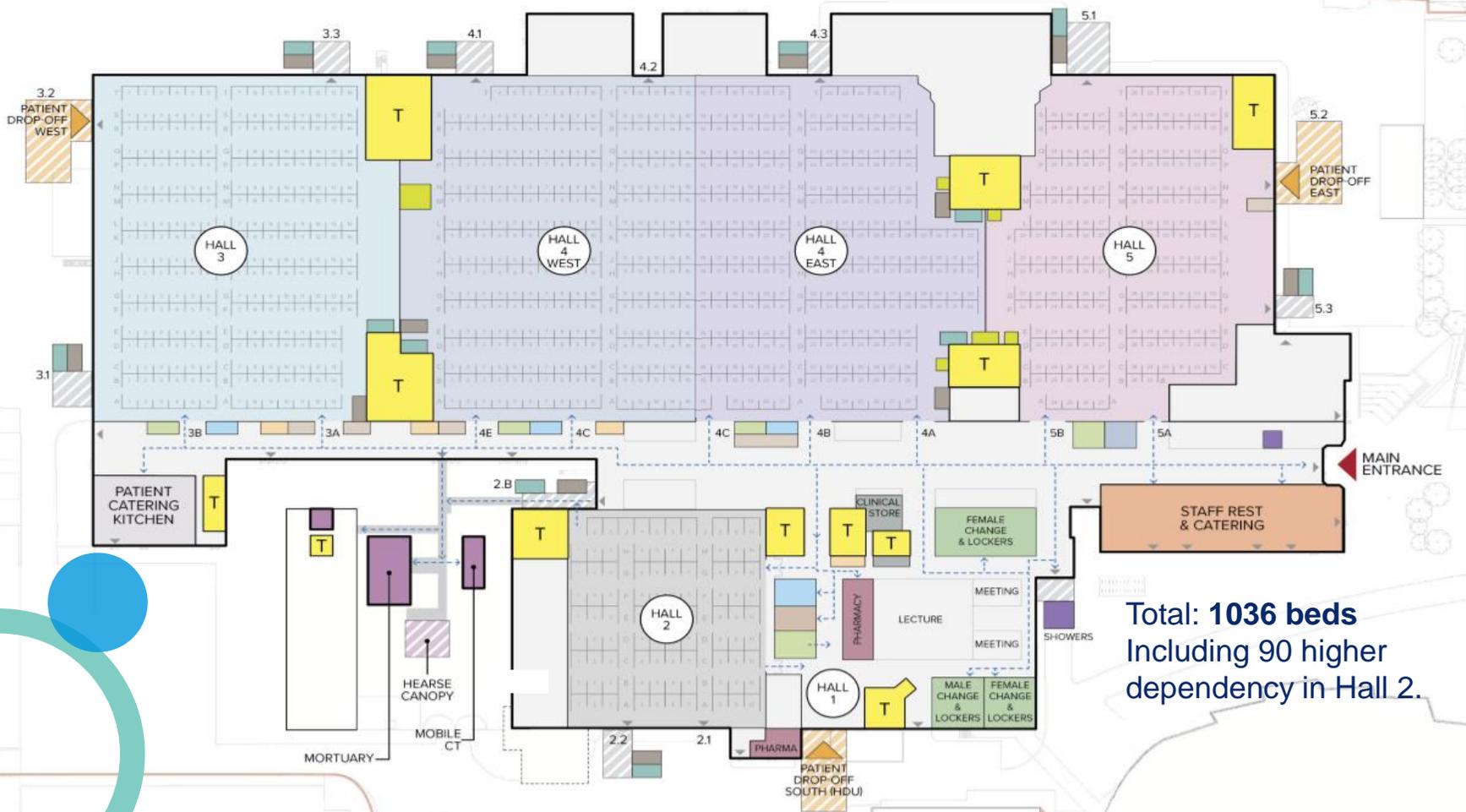


NHS National Services  
Louisa Jordan Hospital



KEY

HALL 2	HALL 3	HALL 4 - EAST	HALL 4 - WEST	HALL 5	STAFF REST & CATERING	STAFF SANCTUARY	CLINICAL SERVICES
DOFF	DON	LINEN	CLEAN UTILITY	DIRTY UTILITY	DSR	PHARMACY	CLINICAL STORE
T TOILETS	ASSISTED SHOWER / WC	STAFF CHANGING	SHOWER	TENT LOBBY	AMBULANCE TENT	PATIENT CATERING	FIRE EXITS



**Total: 1036 beds**  
Including 90 higher dependency in Hall 2.



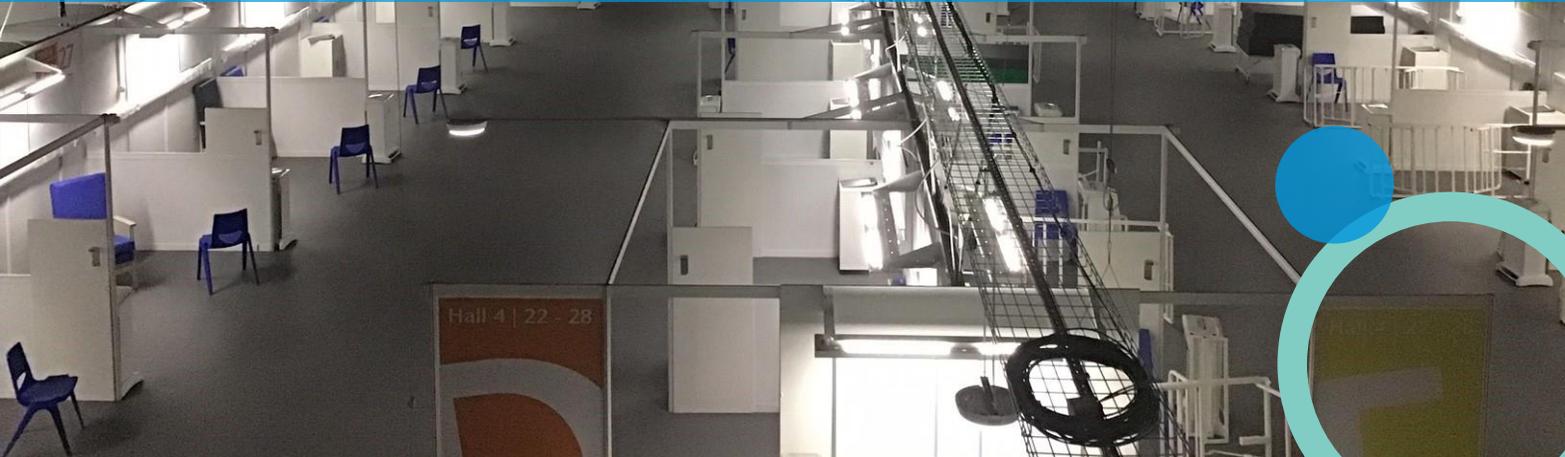
**Key considerations:**

- Existing constraints
- Staffing model
- Repeatable spaces
- Infection control
- Ventilation
- Water
- Med gasses
- Power
- Fire safety
- Respite spaces
- Wayfinding
- Clinical services
- Security
- FM logistics
- Digital comms



Repeatable spaces applied to the following design elements:

- Patient bed bays
- WCs
- Accessible and Assisted WCs
- DSRs
- Linen stores
- Clean and Dirty Utility Rooms



Key considerations:

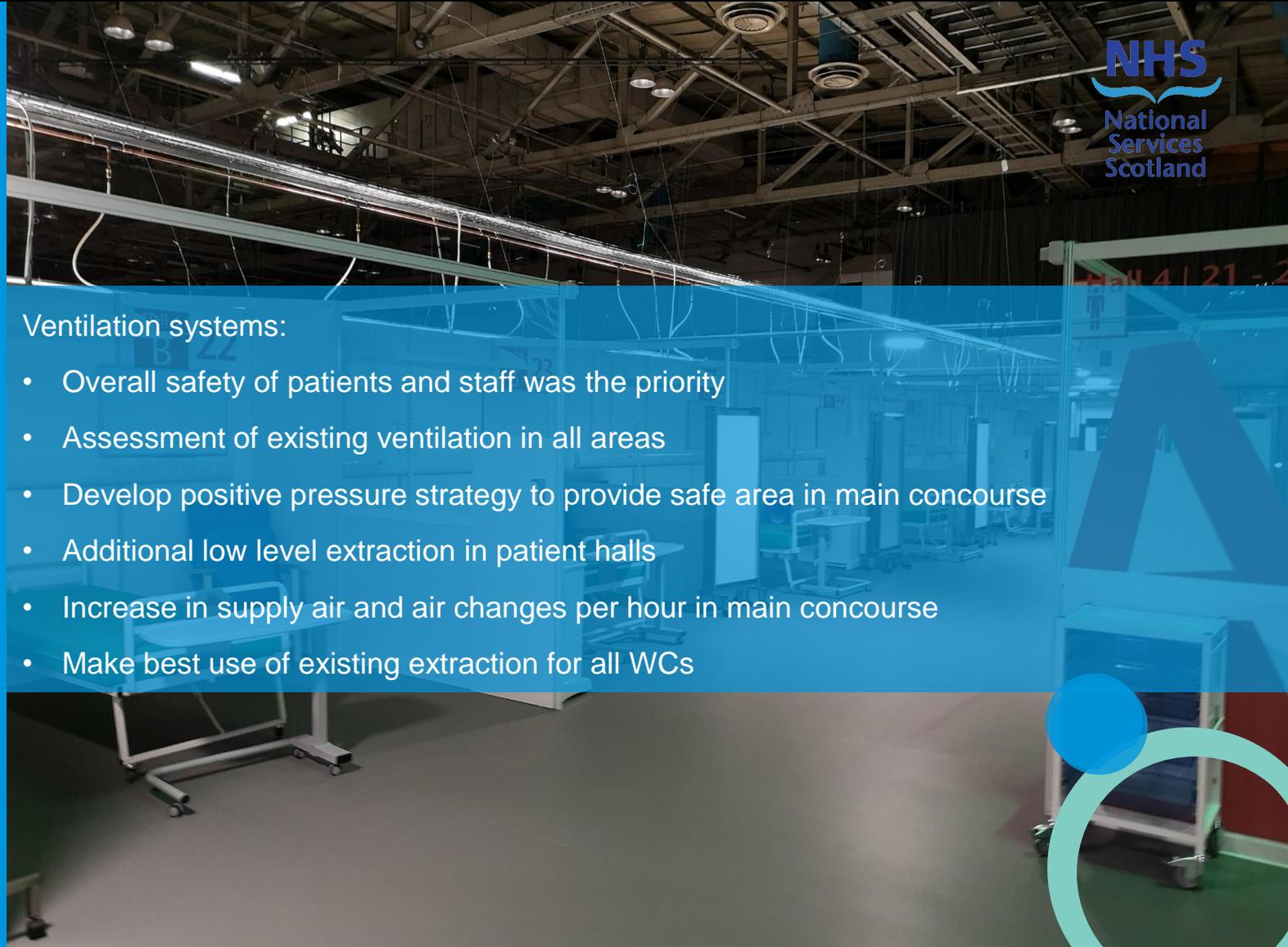
- Existing constraints
- Staffing model
- Repeatable spaces
- Infection control
- Ventilation
- Water
- Med gasses
- Power
- Fire safety
- Respite spaces
- Wayfinding
- Clinical services
- Security
- FM logistics
- Digital comms

## Key considerations:

- Existing constraints
- Staffing model
- Repeatable spaces
- Infection control
- Ventilation
- Water
- Med gasses
- Power
- Fire safety
- Respite spaces
- Wayfinding
- Clinical services
- Security
- FM logistics
- Digital comms

## Ventilation systems:

- Overall safety of patients and staff was the priority
- Assessment of existing ventilation in all areas
- Develop positive pressure strategy to provide safe area in main concourse
- Additional low level extraction in patient halls
- Increase in supply air and air changes per hour in main concourse
- Make best use of existing extraction for all WCs





#### Water & Drainage Systems:

- Dictated placement of additional WC facilities
- Influenced suspended floor details for drainage runs and connections
- Impacted location of external DSRs & Dirty Utilities
- Required addition of access ramps externally to ensure connectivity of internal halls, DSRs and Dirty Utilities

#### Key considerations:

- Existing constraints
- Staffing model
- Repeatable spaces
- Infection control
- Ventilation
- Water
- Med gasses
- Power
- Fire safety
- Respite spaces
- Wayfinding
- Clinical services
- Security
- FM logistics
- Digital comms

Key considerations:

- Existing constraints
- Staffing model
- Repeatable spaces
- Infection control
- Ventilation
- Water
- Med gasses
- Power
- Fire safety
- Respite spaces
- Wayfinding
- Clinical services
- Security
- FM logistics
- Digital comms



**Key considerations:**

- Existing constraints
- Staffing model
- Repeatable spaces
- Infection control
- Ventilation
- Water
- Med gasses
- Power
- Fire safety
- Respite spaces
- Wayfinding
- Clinical services
- Security
- FM logistics
- Digital comms



**Oxygen & Medical Air – Clinically Necessary**

- Tanks, Suppliers & Authorising Engineers in place from outset
- 1 x Oxygen and 1 x Medical Air supply for 946 beds
- 2 x Oxygen and 2 x Medical Air Supply for 90 higher dependency beds

# Timeline

**Jason Leitch**, national clinical director:  
30th March

“So the first thing to say is the most important thing we’re doing is we’re redesigning the way we have  our existing infrastructure. That’s **number one**.

“**Number two** is a reasonable worst case scenario, if the curve really came to accelerate fast, what would we do if we ran out of space in that existing infrastructure.

“We’re still planning with all our hearts and minds to bring that curve down so the existing infrastructure copes. If it doesn’t, then we’re thinking about where we could do high quality care, and the SEC is one of those possibilities.”

# Timeline

**Jeane Freeman**, Scottish Health Minister  
19th April 2020



A temporary hospital, **NHS Louisa Jordan**, constructed in Scotland's largest exhibition centre will be ready to receive patients from Monday.

Jeane Freeman confirmed that construction has been completed of the NHS Louisa Jordan at the Scottish Event Campus (SEC) in Glasgow.

The £43 million facility will initially have capacity for 300 patients but this could be expanded to 1,036 beds if needed.

[www.telegraph.co.uk/politics/2020/04/19/nhs-louisa-jordan-temporary-hospital-glasgow-ready-receive-coronavirus/](http://www.telegraph.co.uk/politics/2020/04/19/nhs-louisa-jordan-temporary-hospital-glasgow-ready-receive-coronavirus/)