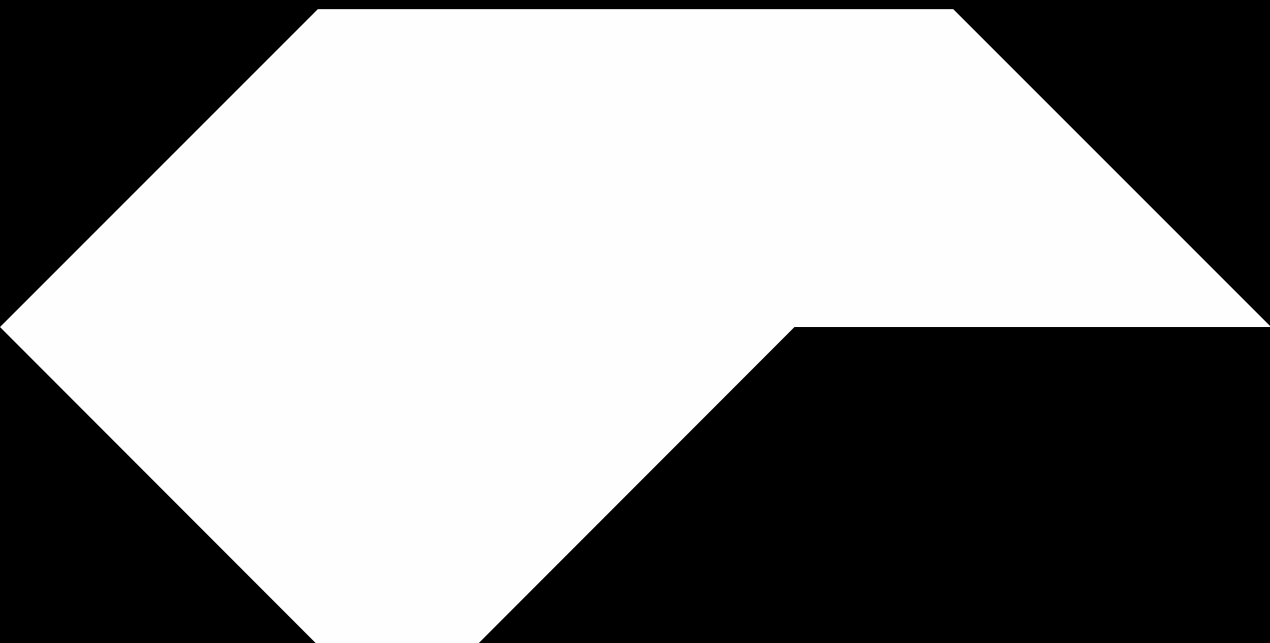


factory
international

Format Specific Fire Risk Assessment

Warehouse Concerts



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1. Introduction

The Regulatory Reform (Fire Safety) Order 2005 places responsibility on individuals within an organisation to carry out risk assessments to identify, manage and reduce the risk of fire. Factory International has a building wide Fire Risk Assessment, and associated policies & procedures.

In order to identify, manage and reduce any risks of fire that are due to performance activity (including visual arts, and corporate events) an event specific risk assessment is carried.

This document should be filled out in conjunction with The Fire Strategy document produced by WSP (Ref - MF-WSP-XX-XX-RP-YD-03-0004 dated April 2023) and Technical Note 70014540-WSP-Xx-ZZ-TN-Y-3004-P01.

This document should only be used for events happening inside Factory International or within the immediate vicinity of the building (public realm and associated squares).

2. Supporting Details

2.1 Relevant Legislation

) Regulatory Reform (Fire Safety) Order 2005

2.2 Responsibilities

Responsible Person	Paul Moore		
Event Space	Full Warehouse		
Assessor:	Paul Moore		
Date of Fire Risk Assessment	5 th December 2023		
<i>(This risk assessment should be reviewed annually or at such earlier time as there is reason to suspect that it is no longer valid or there has been a significant change in the matters to which it relates.)</i>			
Subsequent Review Dates			
Reviewed by		Date	
Reviewed by		Date	
Reviewed by		Date	

3. General Information

3.1 The Installation

Brief Description of the Installation	This risk assessment covers general usage of the Full Warehouse as a single room, with a standing audience. Events covered by this risk assessment have minimal scenic elements, only stage atmospherics have been assessed in relation to special effects. Typical use cases covered by this risk assessment include: Music Concerts Conferences and Presentations Talks Comedy DJs Staging elements need to conform to those describes in the Brief details of construction below. Events covered by the risk assessment need to have no more than 100 people on stage (including technical staff)
Approximate floor area: (m ²)	Two stage Sizes are considered 8M x 19.5M Stage, Audience floor area of 1534 M² 10M x 19.5M Stage, Audience floor area of 1464 M² In addition there are two Assisted Viewing platforms. 1. Capacity 11 2. Capacity 37
Is the Space Sub Divided? (If yes, describe the nature of the subdivisions)	No.
Brief details of construction: (Main structures and elements within the space)	Stage is constructed from steeldeck (steel frame with a plywood top. Over stage are lightning & sound trusses. The stage is backed by a black wool surge drape. For some shows this will have a Fast Fold Projection screen directly in front of it. Show specific risers are placed on top of the stage, from steel deck (steel frame with an plywood top) 1200mm in front of the stage is a crowd control barrier rated to EN 13200

	Midway back is secondary crowd control barrier covering roughly 2/3 (21M) of the room with.
Event Type:	Music Concert or Presentation
Event Mode:	I – Full Warehouse, Hall as a separate Mode

3.2 Risk Profile

BS 9999 is a risk-based document and requires a risk profile to be established to provide a basis upon which fire safety measures are developed. The risk profile is a function of the occupancy characteristic and the fire growth rate for the building.

3.2.1 OCCUPANCY CHARACTERISTICS

This document is concerned with events accessed by members of the public that will be unfamiliar with their surroundings; as such an occupancy characteristic B (awake and unfamiliar with the building) will be applied for the overall building risk profile.

Note: spaces that can only be accessed by staff (e.g. plant rooms) will be classified as occupancy characteristic A (awake and familiar with the building).

3.2.2 Fire Growth Rate

BS 9999 defines the fire growth rate as the rate at which it is estimated that a fire will grow. BS 9999 places the fire growth rates in the following categories:

-) Slow (1) – evenly distributed low-level fire load, small discrete packets of fuel or material of limited combustibility.
-) Medium (2) – Evenly distributed low to mid-level fire load comprising of a mix of combustible materials.
-) Fast (3) – Stacked combustibles (on or off racking shelving but excluding high rack storage), some small quantities of materials other than materials of limited combustibility (or where larger quantities are stored in separate fire-resisting enclosures), process, manufacturing or storage of combustible materials.
-) Ultra-fast (4) – Medium to large quantities of materials other than materials of limited combustibility, high racked storage, flammable liquids and gases or where rapid uncontrolled fire growth could occur.

As described in Section 3.1, the building can accommodate a wide range of events meaning that the fire growth rate may vary from one event to another.

However, for most of these events, a slow (1) or medium fire growth rate (2) is considered a reasonable rate. The Warehouse and the Theatre being very large spaces provided with smoke ventilation, a fast fire growth rate is unlikely to occur.

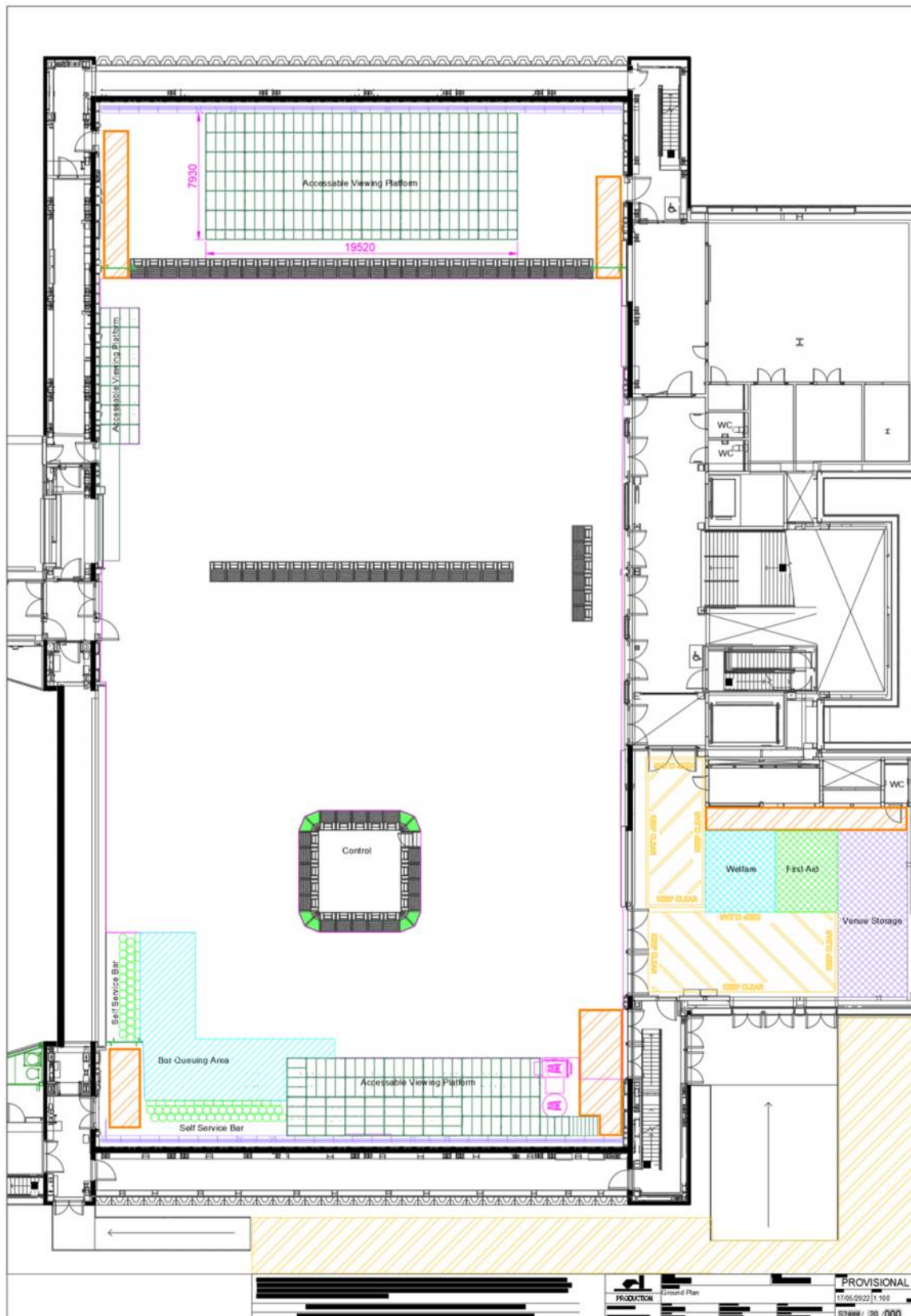
Rooms potentially containing a high fire risk such as places of special fire hazard will be classified as fire growth rate 3 (fast) and enclosed within a fire-resisting enclosure.

3.2.3 Event Risk Profile

Based on the above, it is proposed to apply a risk profile B2 as the overall building risk profile (as this is applicable to the majority of areas). The Warehouse and Foyer have both additionally been considered with a B3 risk profile (as well as B1 and B2) to capture any events that may be managed by Factory International in the future where there is a potentially higher fire growth rate.

Using the information above, and knowledge of the elements being installed for the event, what is the risk Risk Profile associated with this event.	B2 The staging elements are of minimal combustibility, however they are in the same room as the audience.
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3.3 Event Layout

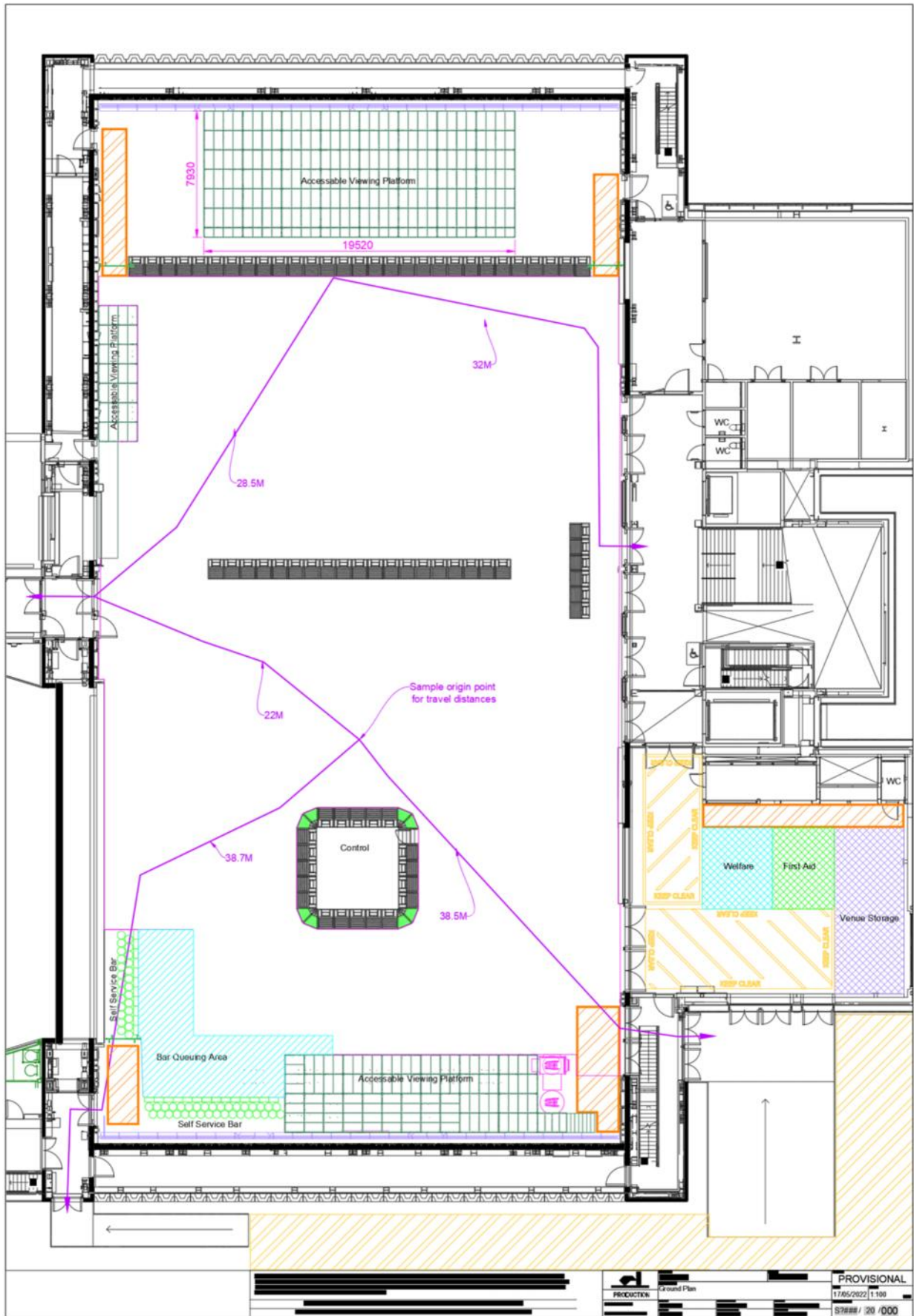


3.4 Travel Distances

Travel distances vary with the risk profile (as per the table below). Travel distances will comply with the recommendations of Section 16.4 of BS 9999 and will be measured to the nearest storey exit, to outside or to a separate compartment.

Risk Profile	Maximum travel distance (m)	
	One Direction	More than One Direction
B1	24M	60M
B2	20M	50M
B3	16M	40M
Area with seating in a row	15M	32M
A3 (Plan areas)	18M	45M
A2 (Staff Areas)	55M	22M

Can all positions in the Event Travel in More than one Direction?	Yes
If any positions have only one direction of escape, what is the maximum travel distance?	N/A
If any positions have more than one direction of escape, what is the maximum travel distance?	38.7M
Risk profile the Travel Distance is compatible with	B2
Is this compatible with the risk profile of the event?	Yes



4. Event Occupancy Numbers

4.1 Floor Space Factors

For the 8M deep stage the available floor space for audiences is 1513M² with a space factor of .33M² this gives a stalls capacity of 4584, plus 49 on the Accessible viewing platform (4633 total).

For the 10M deep stage the available floor space for audiences is 1464M² with a space factor of .34M² this gives a stalls capacity of 4305, plus 49 on the Accessible viewing platform (4354 total).

In addition to this there are two Accessible Viewing Platforms.

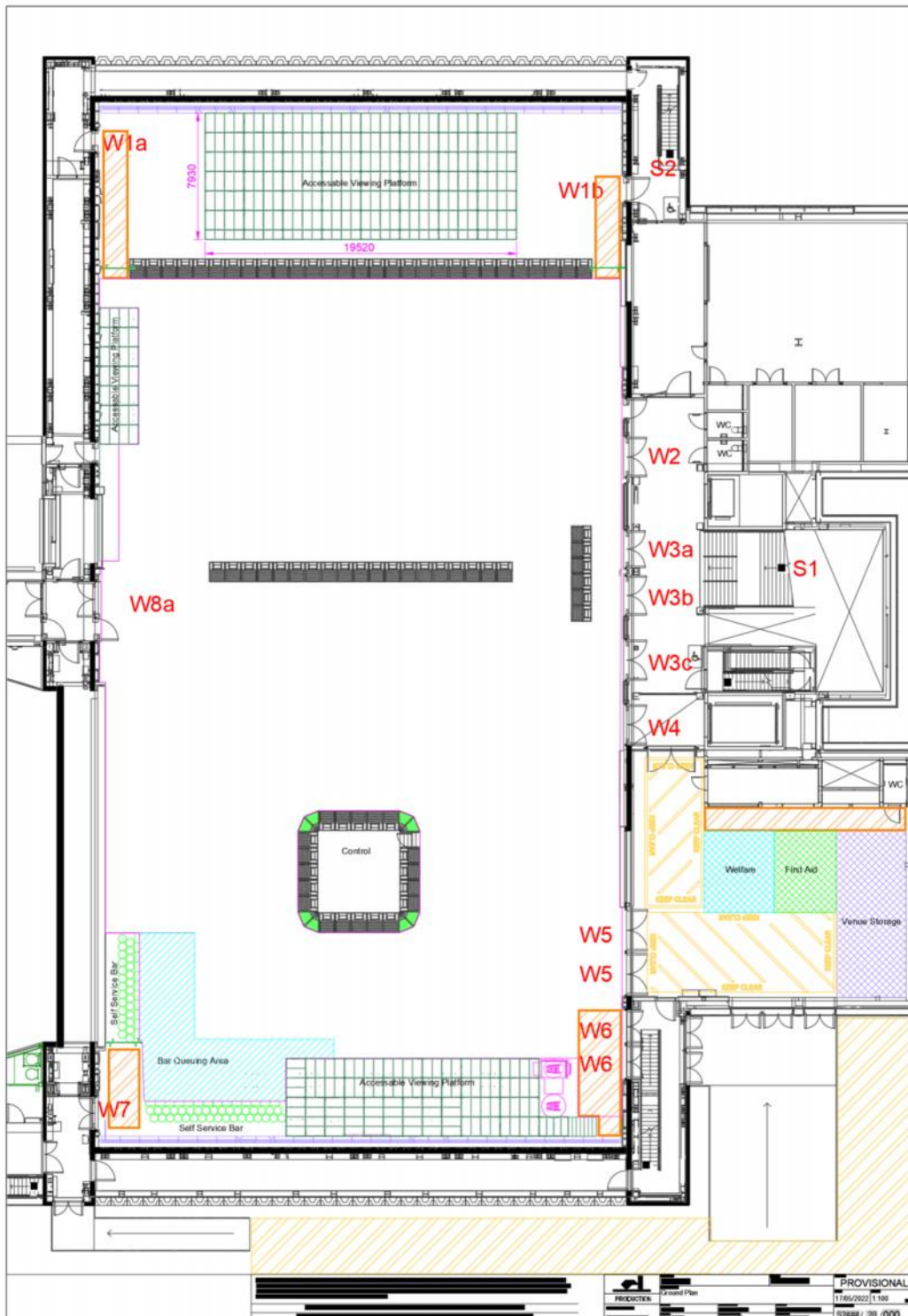
The one closest to the stage Capacity 11 and is accessed via a ramp

The one at the rear of the space, is accessed via two lifts, and two sets of stairs. It has a Capacity 37

The space has been designed to safely evacuate 5000 people and therefore we are well within the available capacity of the room.

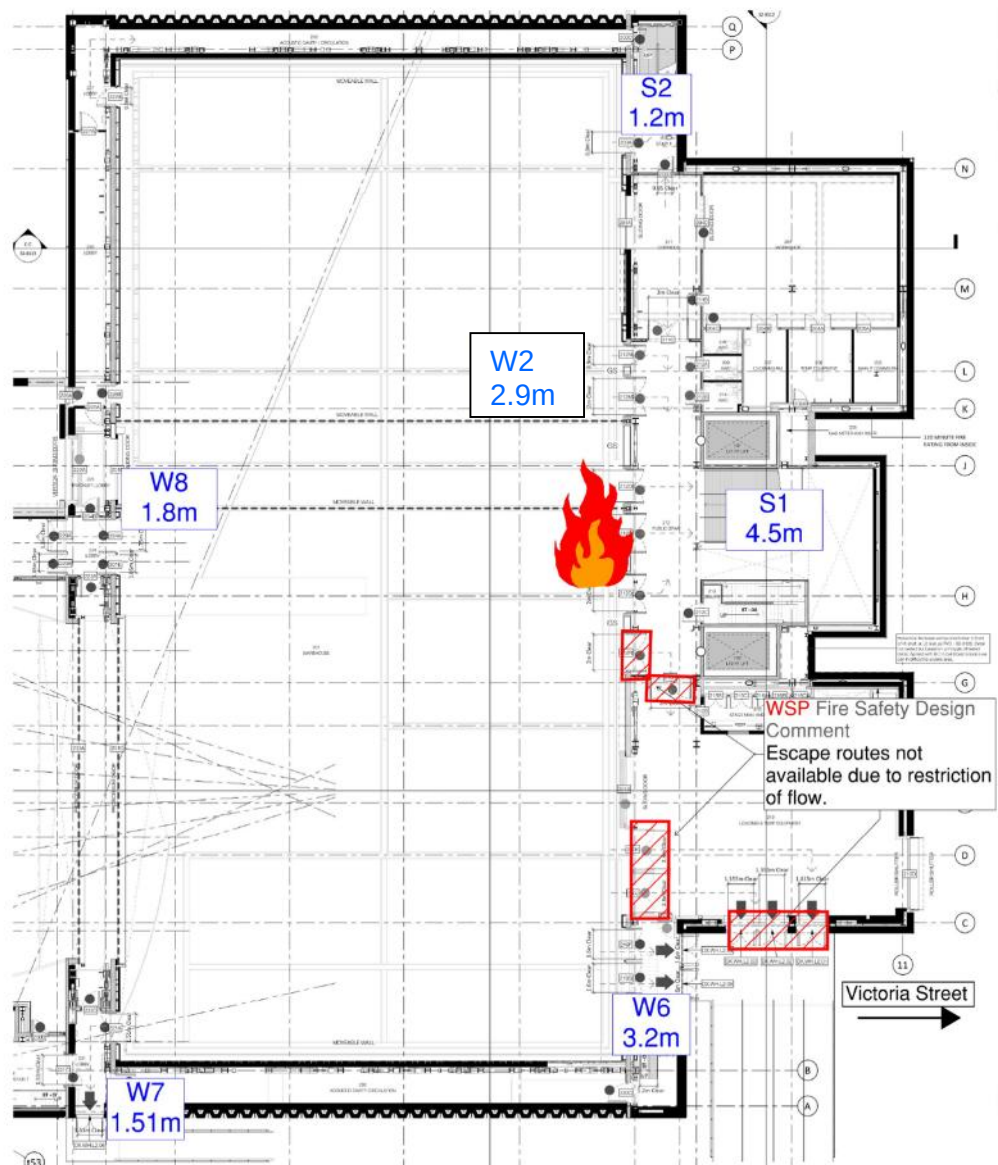
4.2 Fire Escapes

The image below shows the fire escape locations, overlaid on the event layout.



Technical Note 70014540-WSP-Xx-ZZ-TN-Y-3004-P01 reduces the number of available fire escapes in this event scenario to de-risk overloading of the external viaduct and Victoria street (these exits are fed from W4 & W5 (via the loading bay exits) and W6 & W7 directly).

Figure 1 - Means of escape from the warehouse.



Technical note 70014540-WSP-Xx-ZZ-TN-Y-3004-P01 involves detailed modelling to demonstrate that there is sufficient fire escape capacity for up to 5000 people within the warehouse, even with the largest exit take out of use.

It uses W8 Extensively and requires there to be less that 60 people within the Hall & Hall Foyers.

5. Identified Fire Hazards

Factory International uses the Association of British Theatre Technicians, Technical Standards for Places of Entertainment as it's reference approved code of practice for temporary installations.

Items such as fabrics used for scenic construction should be durably flame retardant, or treated and maintained with a flame retarding product. Wooden structures should be a Class 1 (BS 476-7) spread of flame.

Scenic insulations may require additional fire detection and/or additional emergency lighting (both non maintained lighting and directional emergency exit lighting). Additional Fire Fighting Equipment may also need to be added.

5.1 Event Specific Factors

Does the installation include any of the following effects. If so complete additional risk assessments in the sections below.

Pyrotechnics including fireworks	No
Firearms (e.g. blank firing pistols)	No
Explosives and highly flammable substances	No
Real flame	No
Smoking	No
Lasers	No
Stage Atmospherics	Yes
Cooking	No
Compartmentalisation of the Space	No

5.2 Stage Atmospherics

The music performances use stage atmospherics (haze, stage smoke and occasionally low smoke. Stage atmospherics themselves present no additional fire risk (anything that present any additional fire risk will be covered under pyrotechnics or an additional section if more appropriate).

Stage atmospherics do however trigger a false activation in smoke detection either in an individual smoke head or a respirating detection system. In order to run stage atmospherics during a performance, rehearsal, or lighting programming session, a sequence of smoke detectors is isolated by the fire panel.

Isolation should be activated at the latest possible moment and only when stage atmospherics are being used.

During the running of stage atmospherics all stewards, food & beverage staff, and core technical team take on the role of fire wardens.

When calling for isolation, the Duty Lx for the space radios through to the Operational Control Room (OCR) calling for smoke isolation in the Hall. When the relevant smoke detection has been successfully isolated the OCR then radios back to confirm the safe use of stage atmospherics. The OCR then repeats this instruction over the Front of House radio channels to broadcast the change of status.

Once stage atmospherics have been finished with, the Duty LX radios through to the Operational Control Room to enable smoke detection. If not already running, the OCR may turn on the Air Handling to speed up evacuation of atmospherics in the space. The Smoke detection can be enabled once the stage atmospherics have cleared. Once enabled the OCR broadcasts this status on both the Technical and Front of House Radio Channels.

5.3 Scenic Structures

5.3.1 Stage Drapes

Upstage of the playing area is a Black Wool Surge Drape. This is manufactured from J&C Joel Wool Serge 565 (Full data sheet can be found in the appendices). This is treated to BS5867 Part 2 Type B

The Projection screen is Flex White CI from AV Stumfl and is fire rated to EN 13501-1 (Full data sheet can be found in the appendices).

5.4 Electrical Installations

Electrical elements within a production or artwork installation should connect to Factory International's facilities panels via a *plug and play* system and with tested equipment. Populate this section with any unusual elements introduced as part of the event delivery, including and stage practical's, custom wiring, artworks with electrical components.

5.4.1 Artist or Guest Power

Any third party equipment brought into the space will require a valid PAT test certificate. Provision can be arranged in advance for Factory International to PAT test third party equipment where necessary.

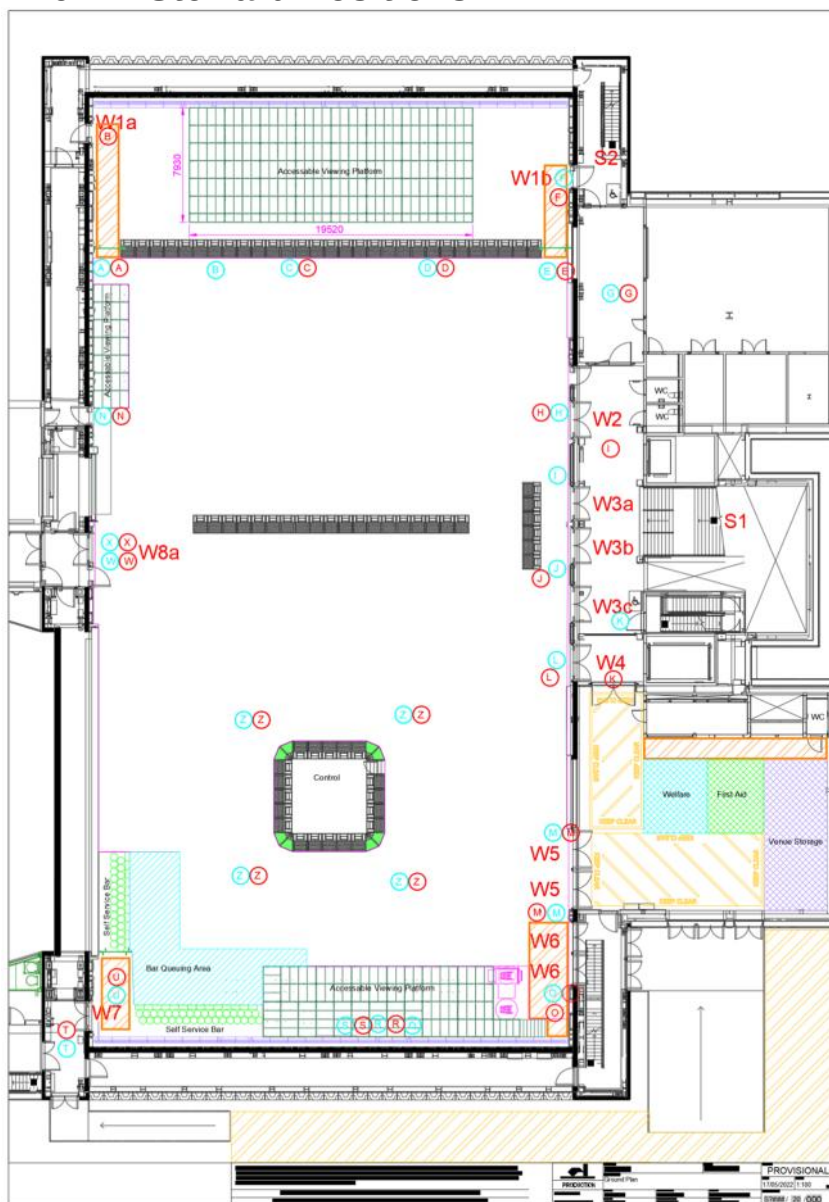
6. Arrangements for Evacuation

In this section detail out the event specific variances from the standard building wide evacuation schedule. Include steward locations and any event specific evacuation routes or exits removed from use.

Note that the steward positions are considered from an Evacuation perspective. Any additional staff required from a Security perspective is assessed in the security evaluation.

Pre-Event the rear gate to the Victoria street should be opened and staffed to ensure clear exit route to the Lower Byrom Street. Ahead of ingress Victoria street should be swept for obstructions (including parked vehicles). There are two low rise and fall bollards that present a trip hazard during a mass evacuation. These should either have risers to make them taller or be stewarded in the event of an evacuation.

6.1 Steward Positions



6.1.1 Default Steward Positions

Note that this arrangement uses the lens of safe evacuation. Some steward positions shown, may be SIA Security via the security risk assessment, however they will have evacuation duties in an emergency.

Position	Location	Duties
A	Front of Stage Pit access (House Left)	SIA positioned in the gap between the stage and the crowd control barrier to monitor the crowd and intervene as required. Moves to door W1a in an evac if W1b is not accessible
B	Front of Stage Pit (Centre)	SIA positioned in the gap between the stage and the crowd control barrier to monitor the crowd and intervene as required.
C	Front of Stage Pit (Centre)	SIA positioned in the gap between the stage and the crowd control barrier to monitor and crowd and intervene as required.
D	Front of Stage Pit (House Right)	SIA positioned in the gap between the stage and the crowd control barrier to monitor the crowd and intervene as required.
E	Front of Stage Pit access (House Right)	Steward positioned in the gap between the crowd control barrier to monitor the crowd and intervene as required.
F	Front of Stage Pit access (House Right)	SIA positioned side stage to monitor the stage access. Evac position at W1b
G	North East Corridor/Workshop	SIA to prevent public from passing the door to back of house, monitor use of adjacent toilets for nefarious activity.
H	North East internal at W2	SIA general crowd management and customer Service
I	House Right Centre	SIA general crowd management and customer service and to manage crowd movement in and out during concert Evac position to open door W3a
J	House Right Centre	SIA general crowd management and customer service to manage crowd movement in and out during concert Evac position to open door W3b
K	Warehouse steps landing	SIA or host crowd management and customer service
L	House Right Centre	SIA crowd management and customer service Evac position to prevent access through door W4
M	House Right Rear	SIA crowd management and customer service Evac position to prevent access through door W5
N	House Right Rear	SIA general crowd management and customer service to manage crowd movement outwards during a fire evac Evac position to open door W6
O	House Right Rear	SIA general crowd management and customer service to manage crowd movement outwards during a fire evac Evac position to open door W6
P	Rear AVP	SIA Support access onto the AVP
Q,R,S	Rear AVP	SIA Support access guests on the AVP Evac position to evacuate audiences
T	Rear Left Corridor	SIA Control Access at key Intersection

		Evac position to open doors
U	House Left Rear	SIA General Crowd Management and Stop public using W7 Evac position to open W7 in an evac
V	House Left Rear	General Crowd Management
W	House Left Centre	SIA General Crown Management Prevent Access though W8a and unauthorised access to Forward AVP Evac position to open doors Wa8 in an evac
X	House Left Centre	SIA General Crown Management Prevent Access though W8a Evac position to open doors Wa8 in an evac
Y	Control point (Centre)	SIA Positioned in the entrance to the control
Z x 4	Centre of warehouse	SIA roaming for general crowd management

In the event of an exit being out of use, where safe to do so, Stewards should maintain position and direct audiences away from the unused exit (using their presences to stop audiences ignoring the command).