



## Sadler's Wells East Technical Specifications

Sadler's Wells Trust Ltd does not guarantee that all or any of these facilities or equipment will be available or suitable for the purposes of the visiting company. A visiting company should in all cases check with the Sadler's Wells East Technical Manager to ensure this information is up to date and correct. At certain times some equipment detailed in this document may be temporarily unavailable.

Please be aware of Sadler's Wells Health and Safety Policy for Visiting Companies, which details safe systems of work for the theatre, and which forms part of the contract with the visiting company. This policy is available to view on our website: [www.sadlerswells.com/about-us/footer-health-and-safety/](http://www.sadlerswells.com/about-us/footer-health-and-safety/)

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## Contact Information & Finding Us

### Technical Team

To be filled - *Technical Manager, Sadler's Wells East*  
+44 (0)207 863 8175

**Paul Milford** – *Head of Lighting, Sadler's Wells East*  
[LightingTeamSWE@sadlerswells.com](mailto:LightingTeamSWE@sadlerswells.com)

**Neil Sowerby** – *Head of Sound, Sadler's Wells East*  
[SoundTeamSWE@sadlerswells.com](mailto:SoundTeamSWE@sadlerswells.com)

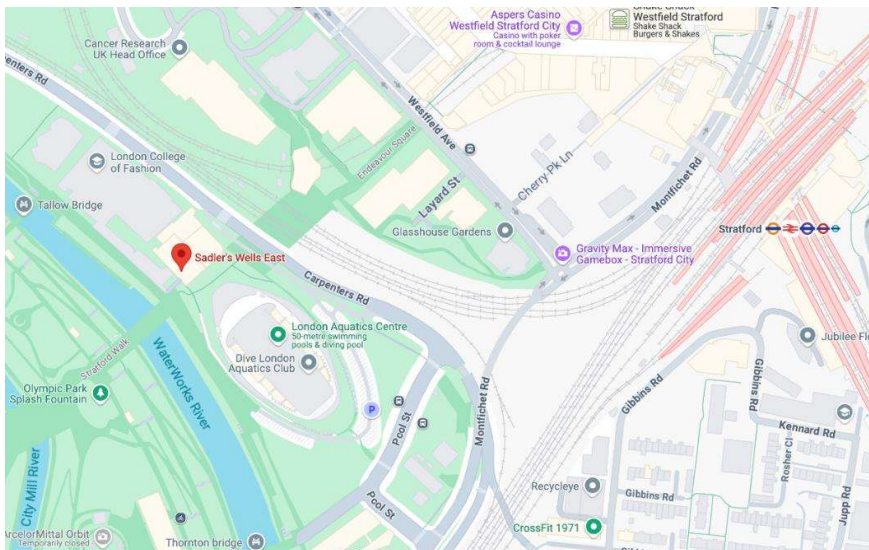
**Andy Howard** – *Head of Stage & Flys Technician, Sadler's Wells East*  
[StageTeamSWE@sadlerswells.com](mailto:StageTeamSWE@sadlerswells.com)

**Miwa Mitsuhashi** – *Head of Wardrobe, Sadler's Wells*  
[miwa.mitsuhashi@sadlerswells.com](mailto:miwa.mitsuhashi@sadlerswells.com)

The full technical team can be contacted at [technicalteamSWE@sadlerswells.com](mailto:technicalteamSWE@sadlerswells.com)

### Our Location

**Sadler's Wells East Stage Door, 101 Carpenters Road, London E20 2AR**  
Phone: +44 (0) 207 863 8295



what3words: /// light.gladiators.shall (stage door entrance)

what3words: /// castle.speeds.label (loading bay entrance)

## Advance Information for Incoming Productions

Sadler's Wells requires the following information in advance from any visiting production:

- Technical specifications, including plans for any set or other construction.
- Details of the materials for any set or other constructions including certificates of flame resistance.
- Risk Assessments and Method Statements for all construction activities.
- Certificates of conformity for all lifting equipment conforming to LOLER (Lifting Operations & Lifting Equipment Regulations 1998)
- Detailed production schedule, with staffing levels required from the house.
- Detailed lighting plan (preferably in DWG format).
- PAT (Portable Appliance Testing) certificates.
- Line schedule or hanging plot, including all weights (see Appendix D for a blank hanging plot).
- COSHH Assessments of substances used in the production.
- Any licenses required in relation to the production.
- Risk Assessments for any special effects in the show (or comparable safety procedures).

In the first instance, these details should be sent to [technicalteamSWE@sadlerswells.com](mailto:technicalteamSWE@sadlerswells.com)

## Working Practices & Safety on Stage

### CDM Briefing / Safety Induction / 'Toolbox Talk'

All shows will include a preliminary briefing at the start of the load-in for all venue and touring staff. This practice is in accordance with CDM (Construction Design & Management 2015 Regulations) and should be scheduled in advance. Furthermore, any set which poses difficulties for backstage access and safe movement in show conditions will require a set induction or briefing session for the show crew prior to the first dress rehearsal.

Sadler's Wells Technical Director and Technical Manager will ensure the Health & Safety Policy and all Safe Working Practices for the theatre are adhered to, and to this end reserves the right to ensure technical staffing levels are at an appropriate level, and to determine what these levels will be. This may result in an increase to requested technical staffing levels to ensure safe working practices for specific tasks or periods of work and may also include the addition of supervisory or Duty Technician roles to ensure the safe running of the theatre. Any such supervisory or duty role will **not have show-critical cues**.

Please note we require a minimal crew call of 4 people for the first four-hour session of the fit-up day to move/hang house masking.

## Working Time Regulations & Overnight Breaks

Please note that in accordance with the Working Time Regulations 1998, an 11-hour break between working shifts must be scheduled for all members of staff. Split shifts can be scheduled so the production finishes late onstage and begins early the next day, but the 11-hour break should not be infringed for any individual member of staff.

Suitable meal breaks must be scheduled for the welfare of all staff, who should not work more than 5.5 hours without a suitable break, this also includes get-outs. To discuss suitable breaks when scheduling please contact the Technical Manager. All schedules must be agreed in advance.

All crew calls must be agreed to in advance of the tenancy.

## Tallescope Safety

Sadler's Well's East uses a Tallescope for focusing lights and other access requirements. Under current guidelines the Tallescope can be moved while personnel are in the basket at the top. This process involves 4 crew: 1 in the basket, 2 at the base guiding the Tallescope and 1 supervisor.

A member of Sadler's Wells staff must be present at all times while the Tallescope is used. Please bear this in mind when setting schedules and crewing levels. The person in the basket must wear a harness & lanyard, which is anchored to the basket, to facilitate an emergency rescue if required.

## Automated Flying System

Sadler's Wells procedure for the Automated Flying System is included in this document (**Appendix A**). It is the responsibility of the visiting company to ensure that all staff are made aware of this procedure and that work is scheduled accordingly in agreement with Sadler's Wells.

As an automated flying house, provision must be made within your schedule to program and rehearse all fly cues associated with your show, in advance of the first performance/dress rehearsal. This must take place under full working lights. Cues can only be programmed once all 'deads' required in the show have been identified, agreed and plotted into the control desk as these references are required to successfully program your show cues.

Please note that communication with the fly floor during the fit-up and get-out is reserved to venue staff leading the Stage, Lighting and Sound department unless otherwise discussed and agreed with the visiting company.

## Noise Levels

Please note that in accordance with the Noise at Work Regulations 1989, the Control of Noise at Work Regulations 2005, and for the benefit and care of all staff and members of the public, Sadler's Wells Trust reserves the right to monitor and if necessary, limit the sound levels for any given performance.

## Loading & Unloading Guidelines

Sadler's Wells Code of Practice for loading and unloading is included in this document (**Appendix B**). It is the responsibility of the visiting company to ensure that all staff are made aware of this Code of Practice and that all relevant activities are carried out in accordance with the Code.

## Sustainability & Waste Management

In accordance with our Sustainability Policy, we try wherever possible to reduce our energy consumption, reduce the production of waste at source, and recycle any remaining waste. To this end we provide water coolers in the café and by the side of the stage, and we do not supply water in plastic bottles. We would also encourage visiting companies to separate their waste in all offices and dressing rooms using the bins provided, and to switch off lights when leaving rooms unoccupied.

## Wellbeing & Welcome

We stand against any form of discrimination; if you experience or witness any unacceptable behaviour, let a member of our team know, or share your experience by email [feedback@sadlerswells.com](mailto:feedback@sadlerswells.com)



## Unloading & Parking

All delivery vehicles need to be booked in advance please; with the following information: date and time of arrival, and departure, vehicle registration, type & class, plus driver name & contact number

## Loading Bay

Sadler's Wells East has a designated loading bay for 2 trailers at the rear of the building. Access to the Loading bays is via a controlled entrance on Carpenters Road, Stratford.

The route from loading bay to stage is entirely flat.

**MAXIMUM VEHICLE HEIGHT FOR ACCESS TO THE LOADING BAY IS 4.6m (H)**

## Dock Levelers

There are 2 x dock levelers, one for each trailer.

### Dimensions

2.0m (W) x 2.5m (L) x 1.1m (H)

### Maximum load

6000kg

## Scene Dock

### Door from Loading Bay to Scene Dock

3.2m (W) x 2.8m (H)

### Scene Dock dimensions

13.8m (L) x 5m (W) x 5.7m (H)

### Scene Dock floor area

78m<sup>2</sup>

### Scene Dock Door to Stage

3.2m (W) x 8.0m (H)

## Goods Lift

(access to dressing rooms, wardrobe and studios only. Stage access is flat from loading bay. Goods lift is only accessible with a full-time member of staff and is not generally available for use during performances. A passenger lift is available if needed.)

### Interior Dimensions

2.1m (W) x 2.6m (D) x 2.3m (H)

### Door Dimensions

1.4m (W) x 2.1m (H)

### Weight Limit

1900 kg

## Auditorium & Capacity

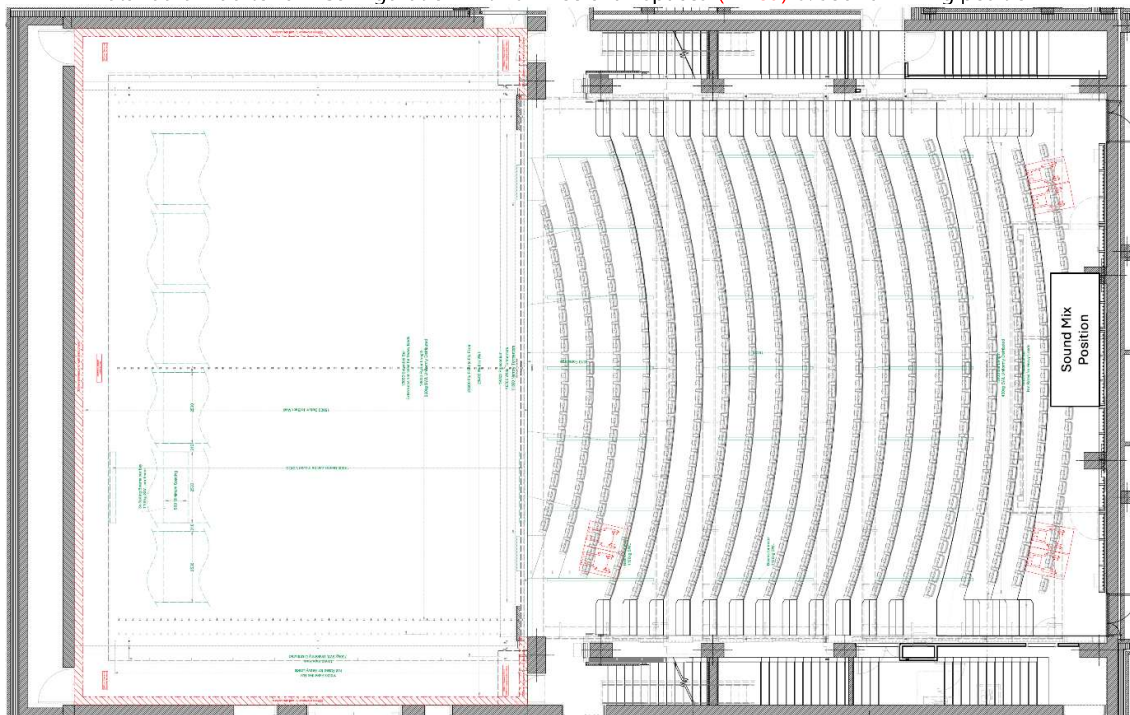
### Standard Layout

Maximum capacity	<b>581</b> of which:
First Circle Terrace	<b>109 seats</b>
Retractable Seating Bank	<b>397 seats</b>
Forestage Pit	<b>75 seats</b>

A further **9 seats** (R9-17) can be added by removing the auditorium sound control position for a total of **590 seats**. This will impede the ability to mix sound live during performances and must be discussed with technical management in advance.

**N.B. Auditorium configuration must be discussed and confirmed in advance prior to your production being booked/confirmed. This is to allow for any relevant turnarounds. Configurations other than the standard seating configuration above will require additional time and crew calls to achieve, which must be reflected in production schedules.**

Standard Auditorium Configuration with 6 wheelchair spaces (in red) & sound mixing position





## Wheelchair User Positions

Multiple configurations are available, allowing for wheelchair spaces on the rear terrace or front row of the seating bank at stage level. The standard layout can accommodate up to 16 wheelchair spaces, reducing the number of available seats by 30.

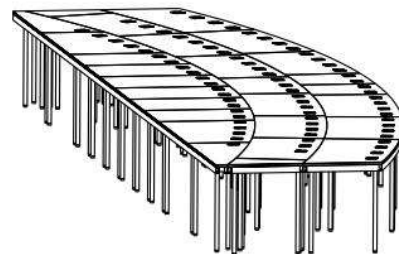
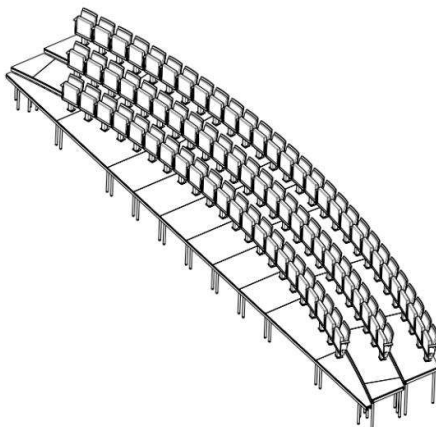
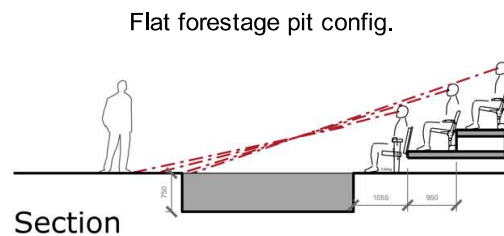
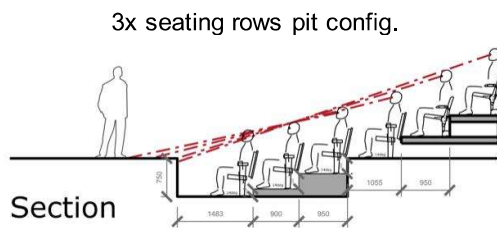
The number of wheelchair spaces is increased or decreased in response to demand.

## Forestage Pit

The forestage pit offers three additional raked seating rows. Alternatively, the pit can be levelled to the stage to provide an extended forestage.

Forestage pit configuration must be specified in advance.

**N.B. Pit configuration must be discussed and confirmed in advance prior to your production being booked/confirmed. This is to allow for any relevant turnarounds. Configurations other than the standard seating configuration above will require additional time and crew calls to achieve, which must be reflected in production schedules.**



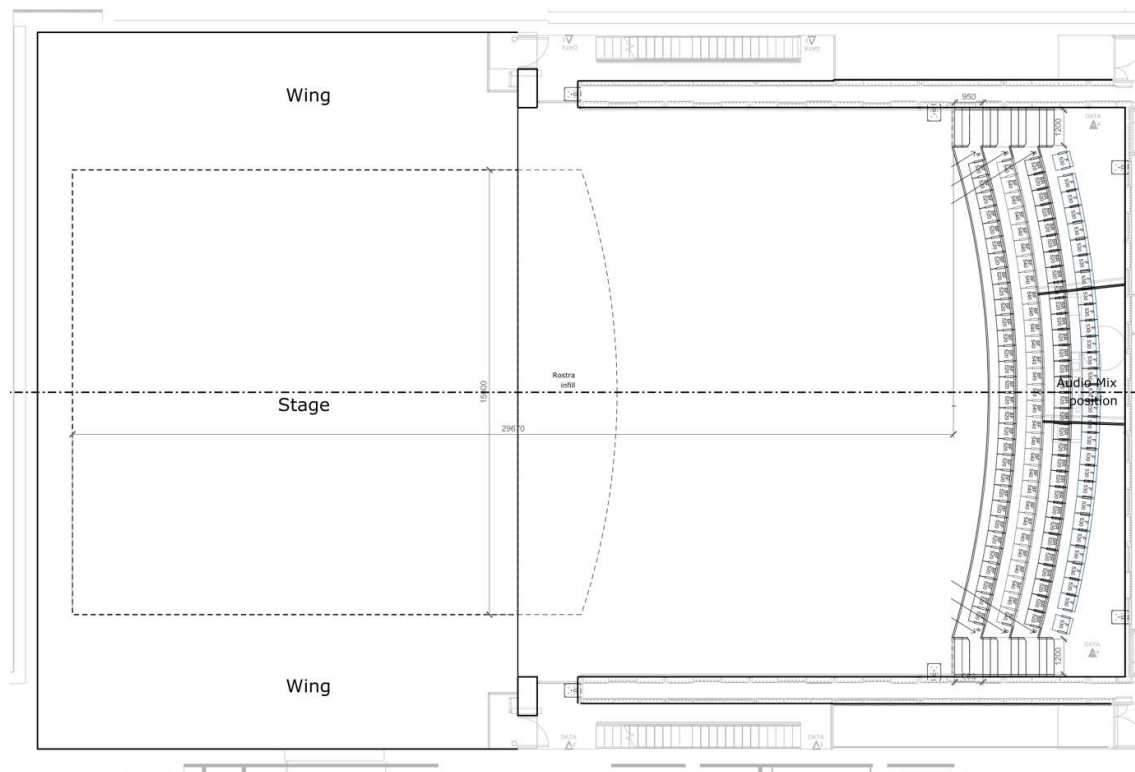
## Promenade Configuration

The seating bank and forestage pit can be removed to create a flat floor configuration, allowing up to **770 (including cast, crew & staff)** standing positions (subject to licensing). The rear four rows remain in place in this configuration.

Please note that this option **MUST** be chosen in advance and will depend on other venue requirements.

**N.B. Auditorium configuration must be discussed and confirmed in advance prior to your production being booked/confirmed. This is to allow for any relevant turnarounds. Configurations other than the standard seating configuration above will require additional time and crew calls to achieve, which must be reflected in production schedules.**

Flat floor configuration with seating bank retracted and forestage pit rostra infill



## Stage & Dimensions

All critical measurements should be made on site ahead of your get-in.

Measurements indicated below take the back of the Proscenium Wall as our Datum line.

### Stage

**Max SWL of stage 7.5kN/m<sup>2</sup>**

Width	<b>25m</b> <i>wall-to-wall</i> <b>19.2m</b> <i>proscenium width</i>
Proscenium Width:	<b>19.2m</b> <i>without tormentors</i> <b>16.7m</b> <i>with tormentors, reducible to 11.8m</i>
Depth:	<b>15.8m</b> <i>Centre Stage from Datum to back wall</i>
Forestage Depth: forestage configuration)	<b>3.31m</b> <i>Centre Stage from Datum to forestage edge (in flat</i>
Sprung Floor Area:	<b>25m (W) x 34m (D)</b> <i>(Covering entire stage &amp; flat floor area)</i>
Stage Traps:	<b>120mm</b> <i>US from Datum Line, full proscenium width</i> <b>1800mm</b> <i>from stage wall SR and SL</i> All traps <b>300mm</b> in width
Flat floor Area:	<b>19.2m (W) x 34.4m (D)</b>
Wings:	<b>2.5m</b> <i>each side</i>

### Fly Tower Heights

Proscenium:	<b>9.8m</b>
Underside of Grid:	<b>22.3m</b>
Underside of SL & SR Galleries:	<b>7.8m</b>
Underside of Upstage Gallery:	<b>9.6m</b>

## Other Dimensions

Width Between Fly Galleries:		<b>20.8m</b>
Wing width from Pros opening:	SR	<b>2.5m</b>
	SL	<b>2.5m</b>
Underside of auditorium LX bridges:		<b>9.90m</b>
Goods lift interior dimensions:		<b>2.1m (W) x 2.6m (D) x 2.3m (H)</b>
Goods lift door:		<b>1.4m (W) x 2.1m (H)</b>
Passenger lift interior dimensions:		<b>1.84m (W) x 1.63m (D) x 2.28m (H)</b>
Passenger lift door:		<b>1.09m (W) x 2.82m (H)</b>

## Sprung Dance Floor

Sadler's Wells East stage is flat and without rake. It has a full sprung floor, covering the entire stage and flat floor area.

Screwing into the floor can cause significant damage to the top level and subsequent levels and is therefore **not permitted**.

Should you require the ability to screw into the floor, please contact the Technical Manager in advance to discuss your requirements.

## Flying & Rigging Systems

Visiting companies are also advised to make themselves familiar with **Appendix A: Safe System of Work for the Power Flying System**

### Overhead Flying – System Control

Control system is built and maintained by TAIT Engineering, with 2 x epiQ desks running on the Navigator system.

[epiQ™ Console Spec Sheet – TAIT Support \(taittowers.com\)](https://www.taittowers.com/epiq-console-spec-sheet)

The system is usually controlled from the fly floor, but alternative control positions are available.

2x Compass hand-held controllers available.

### Fly Tower Facilities

#### 59 x Powered Winch Cross-Stage Fly Bars

**48mm** Ø Ladder Beam (*offset 250mm centres between top and bottom bars*)

**18m** bar length (*without extensions*)

**500kg** Safe Working Load per bar (Uniformly Distributed Load)

**250mm** Centres between fly bars (*except 150mm between Bars 1+2 downstage*)

Starting **150mm** from Datum line

Bar Extensions provided for masking up to **19m** wide (*200kg SWL*)

Speed variable according to load.

**N.B. Fly bars 1-2 (downstage) are permanently rigged with house header & tormentors**

#### 4 x Wing 'Up/Down' Bars

**48mm** Ø Ladder Beam (*offset 250mm centres between top and bottom bars*)

**13.5m** bar length (*without extensions*)

**750kg** Safe Working Load per bar (Uniformly Distributed Load)

**250mm** Centres between fly bars

Bar Extensions provided for masking up to **14.5m** wide (*not rated for heavy loads such as rigging equipment.*)

Speed variable according to load.

**2** bars per side for use by the visiting company with prior agreement.

### 18 x Rolling Beams

Demountable rigging beams rigged from primary steels over stage as shown.

**2.6m** beam length

**1100kg** Safe Working Load per beam



**6 x EXE Rise D8+ 1000kg Chain Hoist** (4 of these are permanently in use for the PA truss and are not normally available for other use)

**4 x EXE Rise D8+ 500kg Chain Hoist**

Can be rigged on Rolling Beams above stage grid or on Beam Trolleys above auditorium.  
Fitted with 26m black chains. Controllable from Navigator.



## Auditorium Positions

### 1 x Rear Auditorium bar

**48mm Ø** Ladder Beam (*offset 250mm centres between top and bottom bars*)

**16.1m** bar length (without extensions)

**400kg** Safe Working Load (Uniformly Distributed Load)

**16435mm** downstage from Datum Line

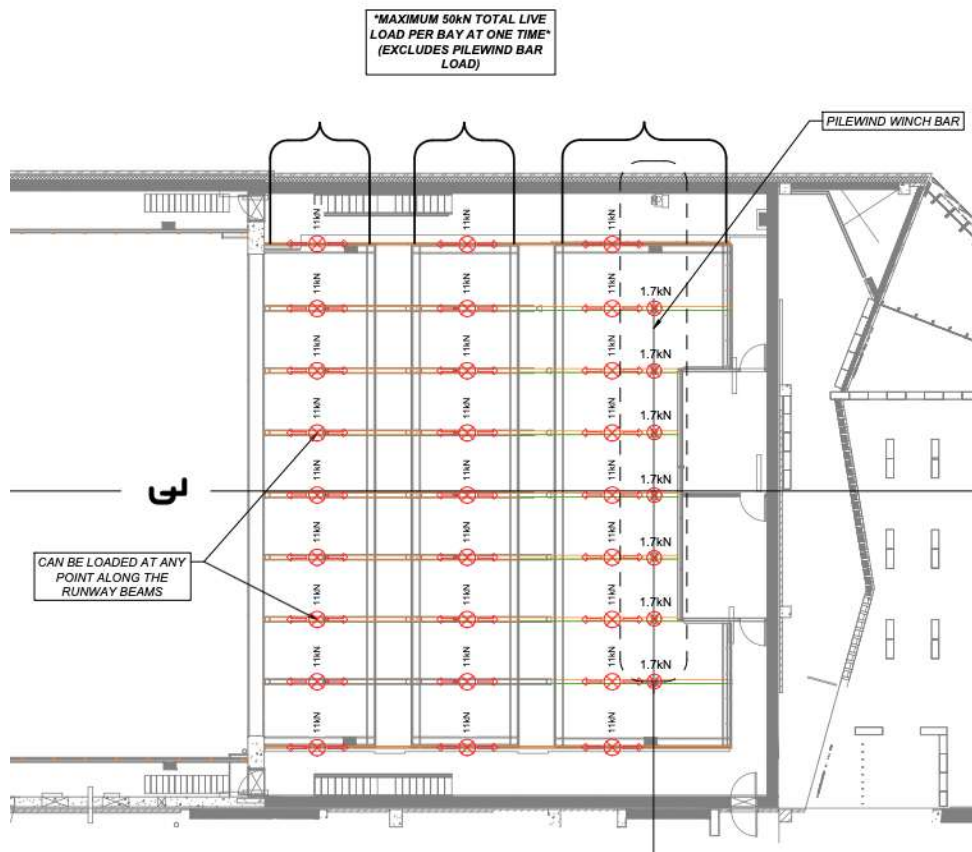
Bar Extensions provided for masking up to **17.1m** wide (*not rated for heavy loads such as rigging equipment.*)

Fixed speed (0.2m/s).

### 21 x Screw drive Beam Trolley

For positioning above auditorium on 7 x runway beams as shown.

**1100kg** Safe Working Load per beam trolley



## Stage Equipment

### Soft Goods

	Width(m)	Drop (m)
2 x Full black cloths	<b>19</b>	<b>10.5</b>
2 x Black half tabs	<b>15</b>	<b>9.5</b>
5 x Pairs Black Legs	<b>3</b>	<b>10.5</b>
5 x Black Masking Borders	<b>19</b>	<b>4</b>

All drapes are without fullness, ties at top, conduit pocket at bottom.

	Width(m)	Drop (m)
1 x 'Creamy White' Opera Screen	<b>16</b>	<b>10.5</b>
2 x Black 8pt sharktooth gauze	<b>19</b>	<b>10.5</b>

**N.B.** Opera screen & gauzes must be requested in advance as they may be in use in other venues

### Dance Floor

8 x rolls Harlequin Cascade Black 2m x 20m

This is sufficient to cover the entire stage floor

**N.B.** Please advise if you intend to use rosin as we normally do not allow it to be used on our dance floors

## Lighting

### Control & Dimmers

ETC Eos Apex 5 lighting console (System Backup as default) – 24576 output count

ETC Eos Apex Processor Unit (System Primary as default) – 24576 output count

ETC Eos Motorised Fader (x10) Wing

Onstage Control PC with Nomad (Client)

ETC Response 2 & 4 port gateways for DMX distribution & alternate console DMX input (fully configurable)

Note, by default all SWE house dimmers are on ACN universe 1.

372 x 3kW (14A) ETC Sensor 3 ThruPower\* dimmer  
12 x 5kW (25A) ETC Sensor 3 ThruPower\* dimmer

\*ThruPower allows dim/non-dim power changeover via the network

### Lighting Power Supplies

**230V** single phase, **400V** three phase, **50 hertz** onstage and throughout building.  
All Lighting power is fed from a **600A** 3 Phase supply

#### STAGE LEVEL

- 84 x 16A dimmer outlets (*distributed SR & SL, paralleled with Soca outlets*)
- 4 x 25A dimmer outlets (*USL, USR, DSL, DSR*)
- Company Supplies (all fed from a **400A** Isolator)
  - 1 x 250A Powerlock 3PNE – Variable RCCB – Dock MSR
  - 2 x 125A CEE form 3PNE – Variable RCCB – Dock MSR
  - 2 x 63A CEE form 3PNE – Variable RCCB – Dock MSR
  - 1 x 32A CEE form 3PNE – Variable RCCB – Dock MSR
  - 1 x 16A CEE form 1PNE – 30ma RCBO – Dock MSR
- 1 x 125A CEE form 3PNE – 300ma RCBO – MSL
- 1 x 32A CEE form 1PNE – DSR
- 1 x 32A CEE form 1PNE – DSL
- 1 x 32A CEE form 1PNE – USR
- 1 x 32A CEE form 1PNE – USL

### **STAGE PERCHES**

- 36 x 16A dimmer outlets (*distributed SR & SL, paralleled with Soca outlets*)
- 1 x 32A CEE form 1PNE – Stage perch low SR
- 1 x 32A CEE form 1PNE – Stage perch low SL

### **FLY FLOOR**

- SL
  - 24 x 16A dimmer outlets (*parallel with 4x Soca out*)
  - 2 x 25A dimmer outlets
  - 1 x 32/3 CEE form 3PNE
- SR
  - 144 x 16A dimmer outlets (Run to IWB LX bars as Default)
  - 6 x 25A Dimmer Circuit
  - 1 x 125/1 CEE form 1PNE

### **LX BARS**

Provision for 6 LX bars, each with:

- 24 x 16A dimmer outlets (*parallel with 4x Soca out*)

### **FOH POSITIONS**

- 28 x 16A dimmer outlets (*distributed SR & SL*)
- 1 x 32A CEE form 1PNE – FoH perch low SR
- 1 x 32A CEE form 1PNE – FoH perch low SL
- 1 x 32A CEE form 1PNE – FoH perch high SR
- 1 x 32A CEE form 1PNE – FoH perch high SL
- 1 x 32A CEE form 1PNE – FoH slips SR
- 1 x 32A CEE form 1PNE – FoH slips SL
- 1 x 32A CEE form 1PNE – FoH mix position

### **FOH LX BRIDGES**

Two Fixed lighting bridges above auditorium, each with:

- 11 x dual 16A dimmer outlets
- 2 x 32/3 CEE form 3PNE (one SR, one SL)

## Network & Data Distribution

There is comprehensive data distribution capability with 94 DMX tie lines and 94 Cat6A ethercon points throughout the theatre/auditorium.

## Lighting Stock

### PROFILE UNITS

110 x ETC Source 4 LED Series 3 Lustr X8

10 x Source 4 XDLT Lens tube – 14°

24 x Source 4 XDLT Lens tube – 19°

55 x Source 4 XDLT Lens tube – 26°

55 x Source 4 XDLT Lens tube – 36°

20 x Source 4 XDLT Lens tube – 50°

12 x Source 4 XDLT Lens Tube – 15-30 (Rigged as FOH Wash as Default)

We hold a stock of gel frames, iris', top & half hats, gobo holders, frost and LED diffusers to fit the above

### WASH UNITS

40 x ETC Desire Fresnel X8 c/w Barndoors

### PARS

25 x Thomas Par 64

- CP62, 61 and 60 lamps available

12 x Par 16 Birdies

### FLOOD UNITS

22 x Source 4 LED Cyc Adapter for use with Lustr X8 above

### EFFECTS

2 x MDG ATME haze Machines

2 x Antari AF3 DMX-controlled fan

**N.B. ALL SPECIAL EFFECTS MUST BE REQUESTED AND APPROVED IN ADVANCE as they may require alterations to automated fire and smoke alarm systems and special local authority licensing approval.**

### **COLOUR FRAME SIZES**

ETC S4 XDLT 26/36/50°	190mm <sup>2</sup>
ETC S4 XDLT 14/19°	250mm <sup>2</sup>
Par64 Parcan	250mm <sup>2</sup>

### **Lighting Rigging Equipment**

6 x 18m lighting bars with 4 x 6-way IWB (16amp - 24 circuits per bar), can be rigged on any lateral fly bar.

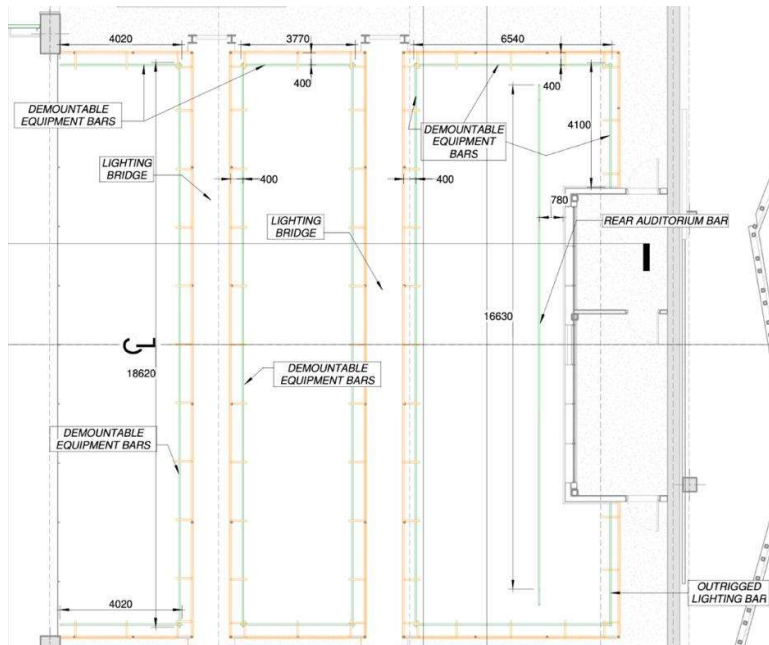
- 12 x Doughty Tank Trap
- 8 x 2m Black 48mm aluminium scaffold pipe
- 12 x 3m Black 48mm aluminium scaffold pipe
- 8 x 4m Black 48mm aluminium scaffold pipe
- 50 x Doughty Black 500mm De-rig arm
- 20 x Doughty Black 250mm De-rig arm
- 4 x Doughty Black 500mm heavy-duty braced De-rig arm
  
- 10 x Floor stand/H-base

### **Rigging Positions (Non-Flown)**

#### **FoH LIGHTING BRIDGES**

Two fixed lighting bridges above auditorium, each with 11x dual 16A dimmer outlets. Rigging bars at 400mm extrusion from bridge and 11m height above stage/flat floor level.





Further rigging positions for fixtures are located throughout the auditorium and fly tower areas, please refer to plans for accuracy.

Equipment should **only be rigged on bars that are labelled with a SWL**. Any alternative rigging must be discussed with the Head of Department or Technical Manager.

## Sound & Video

### Sound Power

Sound power is **230V single phase** supply throughout building.

13A outlets are distributed throughout the venue and available in all notable positions.

32A and 13A AV power available at fly floor and grid levels.

### STAGE LEVEL

- 1 x 63A CEE form 3PNE – 30ma RCBO – Mid-SL
- 1 x 16A CEE form 1PNE – DSR
- 1 x 32A CEE form 1PNE – DSR
- 1 x 16A CEE form 1PNE – DSL
- 1 x 32A CEE form 1PNE – DSL
- 1 x 16A CEE form 1PNE – USR
- 1 x 32A CEE form 1PNE – USR
- 1 x 16A CEE form 1PNE – USL
- 1 x 32A CEE form 1PNE – USL

### STAGE PERCHES

- 1 x 16A CEE form 1PNE – Stage perch low SR
- 1 x 16A CEE form 1PNE – Stage perch low SL

### FOH POSITIONS

- 1 x 16A CEE form 1PNE – FoH perch low SR
- 1 x 16A CEE form 1PNE – FoH perch low SL
- 1 x 16A CEE form 1PNE – FoH perch high SR
- 1 x 16A CEE form 1PNE – FoH perch high SL
- 1 x 16A CEE form 1PNE – FoH production desks
- 1 x 16A CEE form 1PNE – FoH mix position
- 1 x 32A CEE form 1PNE – FoH mix position

## Sound Equipment

### LOUDSPEAKER SYSTEM

#### Standard Fixed PA

<u>Main PA:</u>	<u>Model</u>	<u>Qty</u>
	d&b Audio AL90 Loudspeaker (L, C, R arrays on proscenium)	9

#### Subs:

d&b Audio V-SUB (flown on proscenium)	4
d&b Audio XSL-GSUB (ground stacked)	4

#### Surrounds:

d&b Audio 44S Loudspeaker (6 Left, 6 Right, 8 Rear L/R)	20
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#### Front Fills

d&b Audio 44S Loudspeaker	6
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#### Side Fills

d&b Audio 44S Loudspeaker	2
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#### On-Stage Monitors

d&b Audio Y7P Loudspeaker	4
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*(All powered by d&b 40D and 5D Amplifiers with default system timings and full control via R1 Software)*

4 spare channels are available on 1 x d&b 40D in system

### AUDIO PROCESSING

1 x Yamaha DME7 64 port  
2 x d&b Audio DS10 Audio Network Bridge  
1 x Ferrofisch A32Pro Dante

1 x iPad for system control  
1 x 10EaZY sound level meter

## MIXERS

1 x Yamaha DM7 Digital Mixing Console (120+2 St, 48 mixes, 12 matrix, DANTE)  
1 x Yamaha DM7 Control Sidecar Expansion Controller  
1 x Yamaha DM7 Compact

Main mixing position is in the rear of the auditorium by removing seats Q9-17 R9-16 to create an area of **4.3m wide & 2.7m deep**. A secondary position is in the rear auditorium Control Room with an opening window, please enquire if use of this position is required.

A fully redundant Dante Network with fiber backbone connects FOH to amplifiers and onstage.

## HOUSE PATCH

Dante TX	Bus	Destination
1	Mix 1	Monitor 1 DS L
2	Mix 2	Monitor 2 DS R
3	Mix 3	Monitor 3 US L
4	Mix 4	Monitor 4 US R
49	Matrix 1	FOH L
50	Matrix 2	FOH R
51	Matrix 3	Centre
52	Matrix 4	Subs
57	Matrix 9	Surround L
58	Matrix 10	Surround R
59	Matrix 11	Rear L
60	Matrix 12	Rear R
	Stereo A	L / R / C / Front Fills / Subs

Outputs can be adapted to your specification, but this is our system fresh out of the box if that helps you prepare for your visit.

## PLAYBACK

- 2 x Apple Mac Mini 2024 M4 Chip, 32GB Memory, 1TB SSD. (Master/Backup KVM Switch) running QLab 5.
- 1 x XDANTE-1 Network Changeover
- 1 x Focusrite Scarlett 18i8 USB Interface
- 1 x Autograph Signature Series Go Button

## MICROPHONES

- 1 x Audix DP7 Drum Set
- 2 x Shure Beta 58
- 2 x Shure SM57 LC
- 2 x DPA 2017 Shotgun
- 2 x RPW1 Omni capsules for handheld
- 4 x BSS active DI box

- 2 x Radial ProAV2 passive stereo DI box

## **Video Equipment**

### **COMPUTERS**

1 x Mac Studio, 24 core M2, 128GB Memory, 1TB SSD

### **SIGNAL INFRASTRUCTURE**

- Full Multimode Fibre patch throughout the theatre Neutrik OpticalCON Duo connectors.
- 75Ω BNC/SDI 3G Video Tie lines
- 2 x sets Blackmagic HDMI SDI Conversion Kits

### **PROJECTOR**

Sadler's Wells East does not currently own a projector

## **Projector Positions**

### **FOH – AUDITORIUM**

Flown bar at rear of auditorium in front of control box (see AUDITORIUM RIGGING POSITIONS above), 400kg SWL.

### **STAGE & OVERHEAD**

Projectors can be rigged to overhead flying bars and can be grouped together to create a stable rigging solution, please discuss specific requirements and rigging equipment in advance.

## Wireless Systems

### WIRELESS UHF EQUIPMENT

Visiting companies must check in advance of their visit to ensure that all radio equipment will be clear of interference and are advised to license their own frequencies. If Sadler's Wells Trust is required to license additional frequencies for the use of its own equipment as a result of visiting companies' requirements, this will be charged to the company at the annual rate set by JFMG and must be paid in advance of any retuning. Sadler's Wells Trust reserve the right to charge any additional costs incurred as a result.

### RADIO MICS

1 x Radio Rack (installed together) consisting of

- 2 x Shure SLXD24D Dual Wireless Receiver (4 ways of RF)
- 4 x Shure SLX Handheld with Beta 58 capsules
- 4 x Shure SLXD1 bodypack transmitter
- 2 x RPW1 Omni capsules for handheld
- 4 x DPA 4061 with clips

Sadlers Wells East use the following licensed frequencies (see Appendix E). Incoming companies requiring the use of frequencies within this range should check in advance if they are available for use. Additional frequencies can be obtained in the interleaved spectrum, but care should be taken that any frequencies must be licensed before being used onsite

562.675 MHz	563.200 MHz
564.025 MHz	565.050 MHz
591.425 MHz	592.400 MHz



## Communications

### Wired Intercom

#### **punQtum Wired System**

- 10 x punQtum Q110 Wired Beltpack
- 16 x punQtum Q910/Q920 Lightweight Headset
- Backstage Paging integration from speaker stations
- Full integration with wireless Bolero system

### Wireless Intercom

#### **Riedel Bolero Wireless System 1.9Ghz:**

- 12 x 6 Key Bolero Beltpack
- 12 x AIR-D1 Lightweight headset
- Backstage Paging integration from beltpack
- Full integration with wired punQtum comms system

## Cue Lights

Up to 24 cue lights controlled from the Prompt Desk.

Fixed cue light positions built into panels in all auditorium entrance lobbies (x 6).

Patchable cue light points:

- Downstage left/right
- Midstage left/right
- Upstage left/right
- Downstage centre band pit
- Lower fly floor DSL/DSR (x 2)
- Upper fly floor DSL/DSR
- Rear catwalks left/right (x 2)
- Rear auditorium mixing position (x 2)
- Technical control room (x 3)

## Paging & Show Relay

QSYS paging is available from prompt desk, technical control room, rear auditorium mixing position, production desk position and wireless comms packs.

Paging zones:

- Front of House
- Back of House (all dressing rooms, technical offices & BoH corridors/stairwells)
- Stage
- Dock
- + 2 user-configurable zones

Stage & Dock paging zones are muted automatically in SHOW or REHEARSAL modes via the on-stage worklight panels. These zones can also be muted independently via an override switch on the prompt desk.

Show relay to all Back of House areas.

## Cameras & Video Relay

- 1 x Marshall CV605 PTZ Camera
- 1 x ABUS IR Camera

## Prompt Desk

Adjustable height, wheeled Prompt Desk can be located either DSL or DSR and contains the following equipment:

- 1 x 17" colour HD monitor
- 2 x 8" colour HD monitor
- Paging microphone with 6 zone functionality including mute switch for Stage & Dock paging zones
- Selection switch to allow paging from intercom headset
- HelixNet HRM 4X intercom station
- Show relay speaker
- 2 x dimmable gooseneck LED lights
- MIF 4 Time Clock
- Digital clock synchronised to radio clock signal
- 2 x integrated stopwatch
- 24 x cue light control (PRESET/STANDBY/GO plus MASTERS)
- 13A power sockets & USB charging sockets

The Prompt Desk can be positioned DSR, DSL or at the rear auditorium mixing position.

## Access Equipment

### **TALLESCOPE**

Model 50524 Tallescope

<http://www.tallescope.co.uk/tallescopemodels.pdf>

### **MEWP**

Genie GR20 (Can be used on Dance floor with Floor Protection)

### **LADDERS**

Zarges Skymaster Plus X (10 rungs)

Zarges Skymaster Plus X (12 rungs)

Zarges Skymaster Plus X (14 rungs)

## Wardrobe

### WARDROBE EQUIPMENT

- 3 x Domestic Washing Machines
- 2 x Heat Pump Domestic Tumble Dryer
- 1 x Industrial Tumble Dryer
- 1 x Drying Cabinet
- 1 x Sewing Machine
- 2 x Ironing Boards
- 2 x Steam Irons
- 1 x Domestic Irons
- 3 x Upright Clothes Steamers
- 10 x Costume Rails
- 1 x Spin Dryer
- 2 x Floor Fans
- 10 x Laundry Baskets
- 2 x Hair Dryers
- 1 x 3 Tier Clothes Airer

## Dressing Rooms

Dressing Room 1 (stage level, located near mid-SR entrance) may be used as a quick-change room if not required as an accessible dressing room.

All dressing rooms have lockers or small cupboards.

All dressing rooms are fully accessible, have mirrors, audio show relay, paging calls, and a video feed of the main stage.

All dressing rooms have keypad locks; the codes are available from Stage Door.

Dressing Room 1 is located at stage level. Dressing Rooms 2-7 all offer step-free lift access to the stage.

The BOH passenger lift has a door of 1.09m wide and 2.81m height with internal measurements of 1.84m wide x 1.62 deep x 2.28 high

Dressing Room	Level	Capacity	Notes
1	-2 (Stage)	2	Stage level, accessible WC/Shower
2	-1	6	1 x Shower, 1 x Sink
3	-1	4	1 x Shower, 1 x Sink
4	-1	8	1 x Shower, 1 x Sink
5	-1	12	2 x Shower, 2 x Sink
6	-1	12	2 x Shower, 2 x Sink
7	-1	2	Ensuite WC & Bath

## Studios

By default, studios are not available unless booked in advance

### STUDIO 1     Martha Graham

**Size** 18m x 21m  
**Capacity** 150 dancers or 300 event maximum capacity. Normal occupancy is limited at 210 when other studios are in use.  
**Facilities** Pipe Grid @ 6.65m height, 1x mirror wall, black drapes on perimeter track, adjoining company office to seat three with internet access and tie lines to studio 1

**Martha Graham Studio Terrace** - 6.3m x 22.3m, 140m<sup>2</sup>

### STUDIO 2     Alvin Ailey

**Size** 14.07m x 16.08 m  
**Capacity** 40 maximum capacity  
**Facilities** Pipe Grid @ 4.27m height, 1 x mirror wall with barre, black drapes on perimeter track

**Alvin Ailey Studio Terrace**  
(access shared with Baylis Space)

### STUDIO 3     The Foyle Studio

**Size** 14.07m x 12.15m  
**Capacity** 30 maximum capacity  
**Facilities** Pipe Grid @ 4.27m height, 1 x mirror wall with barre, black drapes on perimeter track

### STUDIO 4     Jospehine Baker

**Size** 14.07m x 12.05m  
**Capacity** 30 maximum capacity  
**Facilities** Pipe Grid @ 4.27m height, black drapes on perimeter track

### STUDIO 5     Cindy Campbell

**Size** 14.07m x 16.15m  
**Capacity** 40 maximum capacity  
**Facilities** Pipe Grid @ 4.27m height, 1 x mirror wall, black drapes on perimeter track

### STUDIO 6     The Legendary Twins

**Size** 14.32m x 12.46m  
**Capacity** 30 maximum capacity  
**Facilities** Pipe Grid @ 4.27m height, 1 x mirror wall, black drapes on perimeter track

All studios have 63A 3phase CEEform outlet, Bluetooth and analog audio inputs, Yamaha DCP rotary volume control of 2 x d&b speakers hung from the pipe grid, internal link for hdmi to central overhead projector position and internal tie lines for audio connections

All studios have accessible RSJ which can be used for a UDL of 50kg/m

**N.B. Any studio access for visiting companies must be requested and approved in advance**



## Appendices

### APPENDIX A: Safe System of Work - Power Flying System

- There are Emergency Stop buttons located SR and SL at stage level, lower fly floor, upper fly floor and grid level.
- Maintain good communications between the stage and the fly floors, or wherever the operator is based. **Limit the number of persons calling instructions to the fly operator, particularly in show conditions.**
- When loading, a visual check should take place by the designated department lead before the bar leaves the ground.
- Manual counterweight systems allow the fly operator to feel the effects of snags on the bar through the rope. This is not the case with power flying and, therefore, **it is extremely important that all moves are clearly observed**; if involving scenic pieces this should preferably be from the floor, and preferably both ends of the bar. There must be agreement in advance between Sadler's Wells crew and the visiting company for who will be responsible for observing moving bars at stage level.
- The system includes slack rope and overload detection, but these mechanisms must not under any circumstances be relied upon to stop movement in the case of accident: the loads and forces involved means that damage is almost certain to be done before the piece is stopped.
- Ensure that artists are informed of all flying cues within a show, especially where bars are moving in blackout conditions, and that full and safe flying rehearsals have been held before the 1<sup>st</sup> show. **This includes a flying rehearsal in full working light if requested by the fly operator.**
- Do not work in the grid whilst the system is in use, unless this has been agreed with the operator beforehand.
- The Safe Working Load is **500kg** for each cross bar. Make sure that there is a good estimate of the weight of each piece of scenery to be rigged. **If a piece is too heavy to rig on a single bar or hoist, Sadler's Wells should be notified in advance of the get-in.**
- The Power Flying System requires the operator to programme information on the show and the scenery, and to take certain decisions about how to control pieces of scenery in discussion with Stage Management.  
**Please note: the system cannot be pre-programmed, all flown elements must be in place, and the flying programming session should be uninterrupted.**
- Provide as much information in advance of arriving, including a running plot for the operator in advance of any programming session or technical rehearsal. Without this information the technical rehearsals may take longer than necessary.
- All scene changes, including interval changes behind tabs, should be planned in advance, discussed with the operator, and programmed for both safety and efficiency.
- **Departing from a pre-programmed sequence will incur significant time delays and potential errors, so should be avoided at all costs.**

## **APPENDIX B: Sadler's Wells Theatre Code of Practice for loading / unloading**

### **STAFFING**

- The visiting company must ensure that a competent person is appointed to supervise the unloading and loading of the truck(s) or wagon(s).
- ALL crew will be competent, well rested at the beginning of the shift, and sober.
- ALL crew will follow Sadler's Wells requirements for Personal Protective Equipment and will wear protective footwear throughout any loading or unloading.
- Sufficient breaks must be scheduled. Guidelines to breaks are detailed in the theatre's technical specifications (these are readily available for all Sadler's Wells theatres). If in doubt, please consult with Sadler's Wells technical management.
- Sufficient crew must be provided or requested of Sadler's Wells in advance. If loading/unloading is deemed unsafe as a result of insufficient crew, Sadler's Wells reserves the right to delay any unsafe activity until such time as additional crew can be deployed.

### **LOADING/UNLOADING**

- The visiting company will have ensured the truck is safely packed, with no dangerously balanced items at risk of falling and injuring any member of any crew. Ideally a plan of the truck, showing the distribution of items within the truck, will be provided in advance (or at least be carried by the supervising member of staff unloading the truck).
- The visiting company will have ensured that boxes, skips and flight cases are safely packed to avoid any unbalanced loads. Weight should be indicated on each item.
- The visiting company will request any necessary lifting equipment (example: forklift truck with driver) in advance of their arrival (should there not be an adequate tail lift or ramp provided on their truck).
- Sadler's Wells will provide lighting should there not be suitable internal lighting on the truck.

### **REPORTING**

- Any and all accidents MUST be reported immediately to a member of Sadler's Wells crew who will ensure that the relevant personnel are informed immediately, in order that all Health and Safety procedures can be followed.
- Near misses MUST be reported to the Technical Director for Sadler's Wells and to the visiting company's Technical Director / Company Manager.

## APPENDIX C: Safe System of Work for Stage

### WHILST UNLOADING/LOADING WAGONS YOU MUST:

- Wear protective footwear.
- Wear high visibility jackets. Jackets are stored **in the Stage Right scene dock.**
- Always be aware of people walking past the dock door and give them the right of way.
- On large pieces of equipment have one or two dedicated people watching for people/traffic.
- At night ensure adequate lighting is provided for any items being moved via stage door or the stage left fire door

### WHILST WORKING IN THE GRID YOU MUST:

- Inform the flys operator that you are about to enter the grid.
- Inform the senior member of staff onstage that you are about to enter the grid.
- Activate the beacons.
- Work in the grid must only take place under full working lights.
- Ensure you leave EVERYTHING from your person, including emptying your pockets, that are not attached by a lanyard.
- Ensure that EVERY tool is attached safely to your person.
- Keep in constant contact with a member of staff onstage if your location in the grid changes.

### WHILST WORK HAPPENS IN THE GRID THE SENIOR PERSON ONSTAGE MUST:

- Inform EVERYONE on stage that people are working in the grid.
- Activate the beacons (if not already activated)
- Assess if the work being carried out in the grid requires everyone onstage to wear hard hats, or:
- if the work is restricted to one area, then cordon off the area with safety barriers.
- In the case of anything being hauled/rigged from stage, ensure you have a dedicated member of staff on the ground allocated to the task at ALL times.

### CALLING IN OR OUT FLYING BARS:

- Only the Designated Person for the task should ask for bars to be moved. Inform the flys operator who this will be.
- Ensure that the bar is completely clear to fly before calling a bar in or out.
- Watch the bar in or out until the move is completed. DO NOT walk away after calling a bar.
- If the bar has lighting fixtures on it, then ensure that all the fixtures hook clamps are adequately tightened, safety bonds attached to bars, and colour frame clips clipped down.
- If the bar has speakers on it, then ensure that all are adequately tightened, and safety bonds attached to bars.
- If the bar has a piece of scenery on it, then ensure that all fixings are secure and safe.

### WHILST WORKING AT HEIGHT (TALLESCOPE/GENIE/LADDER) YOU MUST:

- Ensure that EVERY tool is attached safely to your person.
- Ensure that the people at the bottom of the Tallescope wear hard hats AT ALL times.
- Ensure that you have a dedicated crew member working on the ground clearing any objects that may impede your progress across the stage.

- If working on a ladder you must always have at least one member of staff at the foot of the ladder.

### **PERSONAL PROTECTIVE EQUIPMENT**

- The PPE cabinet is located in the Scene dock - the equipment is there for anyone to use.

## APPENDIX D: Hanging Plot

Side Bars: SR		Bar	From Rear Proscenium Wall (mm)	Notes/Scenery	Side Bars: SL	
63	61	59	14550		60	62
		58	14300			
		57	14050			
		56	13800			
		55	13550			
		54	13300			
		53	13050			
		52	12800			
		51	12550			
		50	12300			
		49	12050			
		48	11800			
		47	11550			
		46	11300			
		45	11050			
		44	10800			
		43	10550			
		42	10300			
		41	10050			
		40	9800			
		39	9550			
		38	9300			
		37	9050			
		36	8800			
		35	8550			
		34	8300			
		33	8050			
		32	7800			
		31	7550			
		30	7300			
		29	7050			
		28	6800			
		27	6550			
		26	6300			
		25	6050			
		24	5800			
		23	5550			
		22	5300			
		21	5050			
		20	4800			
		19	4550			
		18	4300			
		17	4050			
		16	3800			

		15	3550		
		14	3300		
		13	3050		
		12	2800		
		11	2550		
		10	2300		
		9	2050		
		8	1800		
		7	1550		
		6	1300		
		5	1050		
		4	800		
		3	550	HOUSE CURTAIN (NORMAL POSITION)	
		2	300	TORMENTORS PERMANENTLY RIGGED	
63	61	1	150	SCENIC HEADER PERMANENTLY RIGGED	60 62
			<b>0</b>	<b>DATUM LINE (PROSCENIUM REAR WALL)</b>	
		FoH	16385		

## APPENDIX E: Radio and Wi-Fi Policy

Sadler's Wells East makes use of wireless technologies for key functions including control of stage lighting, house lights, sound control, and radio communications. Unauthorised use of frequencies or bands may interfere with the smooth running of a production.

Sadler's Wells operates an open public wifi. Any required additional IT services or details of our services, infrastructure, firewalls, data points or details of streaming bandwidth are available from our Data and Systems Team. Please discuss this with the Technical Manager for further information.

### LICENSED FREQUENCIES

Sadler's Wells maintains licenses for radio spectrum use and most of these radio bands cannot be used by incoming companies or other venue users at any time.

Select bands can be made available with prior agreement for the show run. Being granted availability will not guarantee that this bandwidth will be available in the future and some bands will remain absolutely for Sadler's Wells exclusive use on its sites. Any frequencies that Sadler's Wells require must be kept clear of both direct use and also interference and intermodulation at all times.

Sadler's Wells can source licenses on behalf of incoming companies and will pass on any fees or associated costs. Submission of an application for additional frequencies must take place no later than five working days before the first date that the frequencies are required, so requests to Sadler's Wells technical staff must be made as soon as known.

### SECURITY WALKIE-TALKIES

440.600 MHz  
 426.100 MHz  
 447.825 MHz

These frequencies are used for building radio communications and security and must be kept clear by all other users of the building.

### WIRELESS MICROPHONES

562.675 MHz	563.200 MHz
564.025 MHz	565.050 MHz
591.425 MHz	592.400 MHz

Incoming companies requiring the use of frequencies within this range should check in advance if they are available for use. Additional frequencies can be obtained in the interleaved spectrum, but care should be taken that any frequencies must be licensed before being used onsite. Do note the proximity of Performance Radio Comms to likely frequencies of Wireless Microphones.