Sadler's Wells Theatre 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 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.
https://www.sadlerswells.com/about-us/footer-health-and-safety/

All current plans and technical specifications for the theatre available to download from our website. This includes a working copy of the hanging plot.
https://www.sadlerswells.com/about-us/technical-specifications/sadlers-wells-theatre/

Our building has been mapped with Google Street View cameras and you can now see the images using this link, or access them directly from Google Maps. You simply need to zoom in on Sadler's Wells and drop the yellow peg person in the lower right corner, on any of the blue lines that appear inside the building, these indicate the routes that have been captured.

Contents

Contact Information & Finding Us

Technical Team

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The full senior technical team can be contacted at
technicalseniorteamsadlers@sadlerswells.com

Our Location

Sadler's Wells Theatre, Rosebery Avenue, London EC1R 4TN
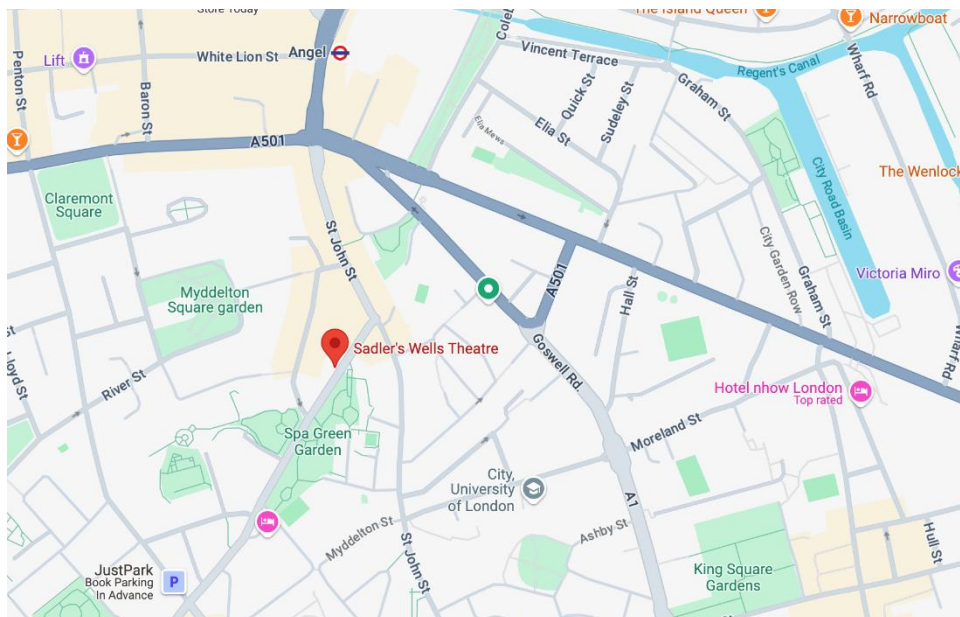
what3words: ///beams.think.spoke   (Stage Door)
                 ///swim.longer.press   (Rosebery Avenue dock door)
                 ///mile.shade.prep   (Arlington Way dock door)

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
- Detailed production schedule, with staffing levels required from the house
- Lighting plan (preferably PDF or vectorworks)
- Line schedule or hanging plot, including all weights (see Appendix F for blank hanging plot)
- Risk Assessments and Method statements for construction activities
- Risk Assessments and Method statements for show specific activities
- Risk Assessments for any special effects in the show (or comparable safety procedures)
- PAT certificates
- Details of the materials for any set or other constructions including certificates of flame resistance
- Certificates of conformity for all lifting equipment (LOLER Regs 1998)
- COSHH Assessments of substances used in the production
- Any licenses required in relation to the production

These details should be provided to technicalseniorteamsadlers@sadlerswells.com

Working Practices & Safety on Stage

CDM Briefing / Safety Induction / 'Toolbox Talk'

All shows should include a preliminary briefing at the start of the load-in for all venue and touring staff. This practice is in accordance with CDM 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.

Safe Staffing Levels

Sadler's Wells Technical Director and Technical Manager will ensure the Health and 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**.

We require sufficient information to book staff at least four weeks before the start of each Fit Up. Late schedule information may result in additional crew being paid at the visiting company's expense.

Minimum Crew Call

Please note our minimum venue crew call during your visit, to ensure the safe operation of the venue and facilitate on in-house tasks to support your production:

4 x Lighting	4 x Stage
2 x Sound	1 x Flys

Working Time Regulations / Overnight Breaks

In accordance with Working Time Regulations 1998, an 11-hour break between working shifts must be scheduled for all members of staff. Split shifts and flexibility of calls can be discussed, 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 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 in advance of the tenancy.

Tallescope Safety

Sadler's Well's Theatre 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 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

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 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.

Unloading & Parking

Dock Doors

Sadler's Wells Theatre has dock doors to the street on both sides of the building
Please advise if you need to use Arlington Way as prior agreement is required from local residents. We request that freight trailers not be left outside the docks door for durations following load ins or load outs due to concerns about access needs of other large and emergency vehicles.

Rosebery Avenue
Main Dock Door
4m H x 3.2m W
Unload to street level then same level to stage
what3words: ///swim.longer.press

Arlington Way
Secondary Entrance
3.1m H x 3.1m W
Unload to street level, ramp to stage (adjustable to flat once load-in is complete)
what3words: ///mile.shade.prep

Load-in Ramp
Please note the Arlington Way load in ramp is to have no imposed load applied unless stationary and either fully up or down. Maximum distributed load when static 13800kg.

Dock doors & load-in ramp MUST ONLY be operated by Sadler's Wells Theatre staff

London Vehicle Tolls

Sadler's Wells Theatre is located within the TFL **Congestion Charge** and **Ultra Low Emissions Zone**. Please familiarize yourself with following TFL guidance:

Congestion Charging Transport For London (tfl.gov.uk)
Ultra Low Emission Zone - Transport for London (tfl.gov.uk)

Loading & Unloading

There are parking bay restrictions for loading which may incur penalty charges:

Loading Allowed – 10:00-16:00 and 18:30-08:30
No Loading – 08:30-10:00 and 16:00-18:30

Please consider if you wish to adjust your schedule or freight arrival times accordingly.

During load-in and get-out members of the public using the footpath have right of way priority.

Please contact the Technical Manager should you need further information or guidance.

Roadside Parking

There are restrictions for waiting overnight with a vehicle over 5T:

Hours of restricted parking outside the theatre are all days of the week, Monday to Sunday, 08:30 – 18:30. Single yellow lines and the signs illustrated indicate no parking during these designated times (Double yellow lines indicate no parking 'at any time').

Sadler's Wells is situated on a busy main road, and as a result there are additional restrictions in force. Waivers to parking restrictions unfortunately cannot be obtained by Sadler's Wells from the local authority (Islington Council).

We request that freight trailers not be left outside the docks door of Arlington Way for durations following load ins or load outs due to concerns about access needs of other large and emergency vehicles.

Information on Freight parking in the UK can be found here:
http://www.iru.org/transpark-app

Auditorium & Capacity

Standard Layout

Maximum capacity	**1569**	
Stalls	**666 seats**	(Reduces according to pit layout – see below)
First Circle	**420 seats**	
Second Circle	**483 seats**	(Inclusive of standing room on Side Gallery)

Wheelchair User Positions

In the above standard layout we can remove **12** seats in **stalls rows J & K** to create spaces for **3** wheelchair users and **3** accompanying persons.

The number of wheelchair spaces in **rows J & K** is increased or decreased in response to demand.

Forestage Lifts

With a full-sized orchestra pit/forestage of 3 orchestra pit lifts (rows AA-DD removed)
Removes **93** Seats - seats remaining in the stalls: **573** seats

With medium sized pit/forestage of 2 orchestra pit lifts (rows BB-DD removed)
Removes **69** Seats - seats remaining in the stalls: **597** seats

With a small sized orchestra pit/forestage of 1 orchestra pit lift (rows CC- DD removed)
Removes **45** Seats - seats remaining in the stalls: **621** seats

The sound control position in the rear stalls removes a further **18** seats in rows S, T, and U.

Forestage Lift
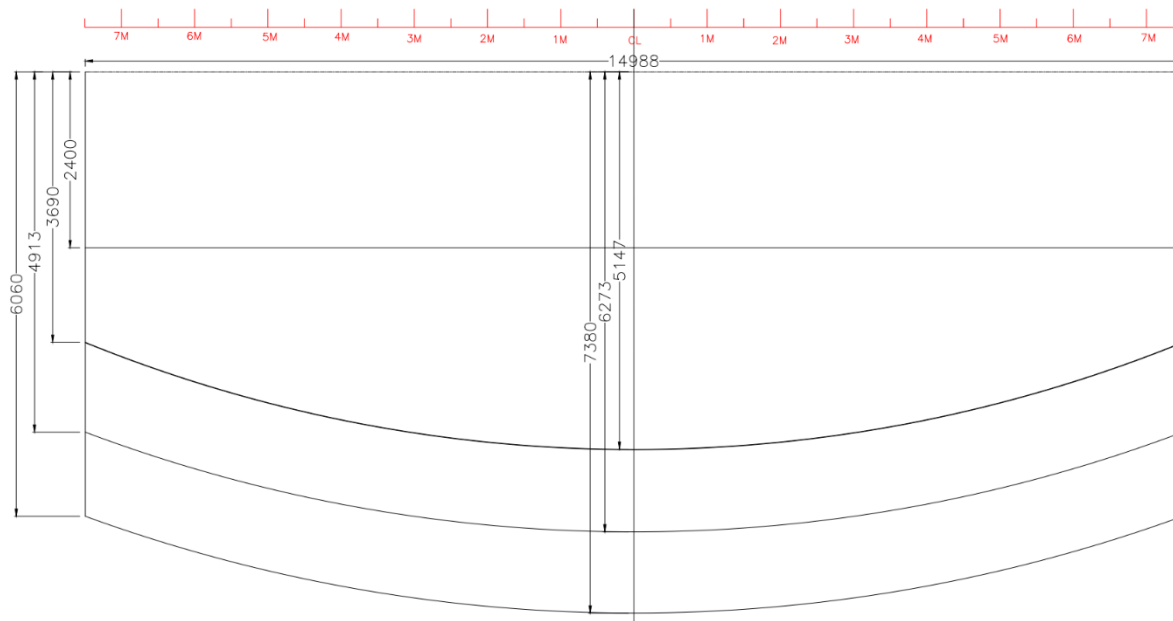
The clearance of the undercroft is **190 cm** at its lowest and **196 cm** at its highest.

Promenade Configuration

Removes a total **308** seats in stalls rows **DD to AA** and **A to H**.

Replaced by up to **432** standing positions (subject to licensing).

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

Stage & Dimensions

Dimensions

For all these measurements, please refer to our stage plan (AutoCAD) for further accuracy and sightlines. All critical measurements should be made on site ahead of your get-in.

Measurement indicated below take the back of the Safety Curtain track as our Datum line.

Stage

Max SWL of stage 7.5kN/m2

Width:	*Downstage*	**23.5m**	
	Upstage	**21.5m**	*Stage Left wall is at an angle*
Proscenium Width:		**15m**	*Reducible down to 10m with tormentors*
Depth:		**15.73m**	*Centre Stage datum to backwall*
Forestage Depth:		**1.50m**	*Centre Stage datum to stage edge*
Depth of flying from Proscenium:		**15.20m**	
Dance Floor (Sprung Area):		**19.187m W** x **14.484m D**	
Dance Floor (incl Metal Surround):		**19.361m W** x **14.562m D**	

Fly Tower Heights:

Proscenium:	**10m**	*Flown header usually set to 8m (lower if sightlines permit)*
Underside of Grid:	**22.5m**	
Underside of Fly-Floor/Gallery	**7.801m**	(**7.746m** clear under sprinkler pipe)
SR Get-in/Dock Area:	**3.3m**	

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Other Useful Dimensions:

Width Between Fly Galleries:	**20m**	
Wing width from Pros opening:	**4.5m**	SR
	4.5m	DSL
	2.5m	USL
Side Stage Storage (approx.)	**25m²**	
Back Of House Lift (Doors):	**1.3m**	Width
	2.1m	Height
	2.3m	Diagonal
Back Of House Lift (Interior):	**1.6m**	Width
	2.25m	Height
	2.3m	Length

Sprung Dance Floor

Sadler's Wells stage is flat and without rake. It has a full sprung floor, width **19.187m** and depth **14.484m**.

The sprung floor is laid in panels over a substructure, each panel is comprised of several layers:

- 1st layer is 6mm hardboard
- 2nd layer is 14mm plywood
- 3rd layer is 18mm squares neoprene foam & slim wooden strips alternating in a hollow void
- 4th layer is 3mm hardboard

CROSS SECTION OF SPRUNG FLOOR

← 6mm hardboard
← 14mm plywood
← 18mm void

← 3mm hardboard

OPEN PLAN VIEW OF SPRUNG FLOOR

Screwing into the floor can cause significant damage to the top level and subsequent levels, and due to the void/neoprene foam and the thin hardboard at the bottom of each panel of sprung floor, it is not a secure base for anything that may require substantial anchoring. A load under pressure has the potential to cause significant damage.

As we also stage performances without dance floor and sometimes entirely bare Sadler's Wells requests that you do not screw into or bolt into the sprung floor, or otherwise cause damage to the top level, so that we may continue to offer the bare floor as a suitable performance surface. Should you require the ability to screw into the floor, please contact the Technical Manager or Head of Stage & Flys 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

Krupp Silent Winches control system by Stage Technologies (now maintained by TAIT Engineering), with E-Chameleon Nomad control desks. The system is usually controlled from the fly floor (stage right), but alternative control positions are available.

Fly Tower Facilities

72 x   **Powered Winch Cross Stage Fly Bars**

48.3mm Ø Ladder Beam *(offset 125mm centres between top and bottom bars)*
600kg Safe Working Load UDL; **120kg** point load
Bar #4 has a 1000kg capacity UDL
16 Metre Width
200mm Centres between fly bars
Starting **750mm** from Datum line
Bar Extensions provided for masking up to **19m** width
     (for softs etc. - not rated for heavy loads such as rigging equipment.)

Speed variable according to load.

Bars #4, #10, #20, #40, #70 #75 & #76 all have load sensing, which allows us to provide an approximate weight of items rigged on these bars.

4 x   **Wing 'Up/Down' bars**

48.3mm Ø Ladder Bars *(offset 125mm centres between pipes)*
600kg Safe Working Load (Uniformly Distributed Load)
13 Metre Length
2 bars per side

15 x   **Point Hoists**

Variable positions, 800kg load capacity, operated by the same Nomad system – winches are located in grid level 2. Please enquire in advance if you wish to use these during your visit so that we can confirm if your desired hoist positions are physically achievable

See Appendix E for further details.

Downstage of User-Allocated Fly Bars

Details are on the theatre plans and Appendix E of this document. These items remain in position at all times and must not be obstructed.

Tormentors (**Bar #300**)
House Header (**Bar #200**)
House Tabs (**Bar #100**)

Forestage Grid

Forestage grid with **6** power flying winch bars, SWL 600kg UDL.

Bars #101 and **#102** are in use for the speaker bar assembly and architectural panels and not available for use by the visiting company without prior agreement.

Forestage bars not 'live' flyable during performances with exception of **Bar #103** & **Bar #104**.

Safety Curtain

Our Safety Curtain controlled from SR wing. Fixed speed **38 seconds** to come in, **36 seconds** to go out. This enables a hard-edge guillotine 'curtain' effect.

It is a requirement that the Safety Curtain MUST be able to close and as such the Safety Curtain must remain clear of equipment/scenery.

Front of House Bridges

Load-bearing beams, one each above bridges 1, 2 and 3, capacity **250kg** per point, **750kg** in total for each beam.

Stage Equipment

Soft Goods

	Width(m)	Drop (m)
6 x Black Masking Borders	**19**	**4**
6 x Pairs of Black Legs	**3**	**10.5**
1 x Pair Black narrow Legs	**1.5**	**10.5**
3 x Black Full Width Cloths	**19**	**10.5**
2 x Black Wide Cloths	**15**	**9.25**
2 x Black Gauze	**19**	**10.5**
1 x White Cyc	**16**	**11**
1 x Cream Bounce Cloth	**16**	**10**
3 x Truss borders (various sizes)		

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

Dance Floor

Sadler's Wells has several dance floors available for use, three black Harlequin Cascade black dancefloors and a floor suitable for hip hop productions. Please discuss in advance so we can provide the floor most suitable for your production. Measurements of floors:

8 x Harlequin Cascade Black dance floor **20m** long **2m** wide
1 x Harlequin Cascade Black dance floor **15m** long **2m** wide (for proscenium)

There may be a grey dance floor also available for use, please ask Head of Stage & Flys for details in advance. Please note this is stored offsite and will also incur transport and crew charges payable by the incoming Company.

Please advise if you intend to use rosin as this is <u>ONLY</u> permitted on our 'Number 3' black dance floor.

Ballet Barres

4 x Ballet Barres for onstage use. 2.1m length x 1.05m barre height

Other

Metro Deck:
10 x 2x1m
1 x 1x1m
4 x 1m Handrails
2 x 2m Handrails

Production Network

Sadler's Wells Theatre operates a converged production network. All lighting, sound, video, comms, and visiting company networks are routed through a centralised core switching system. The network topology is fully redundant and built on the Luminex GigaCore ecosystem. *Detailed topology diagrams and switch specifications are available on request.*

Network Access

The recommended method of connecting to the theatre's network is via DHCP. Devices configured for DHCP will automatically receive an IP address, subnet mask, and gateway from the system. The DHCP lease period is seven days. If a device will be offline for longer than this but still requires a consistent IP address, the lease can be extended or a reservation created by prior arrangement.

Some devices may require the use of a static IP address. In this case, the following ranges should be used:

Lighting:	Dante Primary:	OSC:
IP Address: 10.101.200.(200 to 230)	**IP Address:** 10.201.100.(200 to 230)	**IP Address:** 10.101.205.(200 to 230)
Subnet Mask: 255.255.255.0	**Subnet Mask:** 255.255.255.0	**Subnet Mask:** 255.255.255.0
Gateway: 10.101.200.1	**Gateway:** 10.201.100.1	**Gateway:** 10.101.205.1

If you require a greater number of devices, please contact us and we can advise suitable addresses.

Protocol Notes

sACN:

A Luminex LumiCore 16 is used to bridge the visiting company's lighting network with the Sadler's Wells house network. If you are bringing your own switches to run toured fixtures or dimmers, please inform us of the subnet used by your control devices and the sACN universes you require from our venue. *Please note: the LumiCore maintains isolation between the two networks and passes only sACN traffic. As a result, RDM functionality for house fixtures will not be available across this link.*

OSC:

Devices can receive OSC commands through the dedicated OSC VLAN. When using QLab 4 or earlier, it is required to target the broadcast address 10.101.205.255. Doing so ensures all devices on the network receive the data simultaneously, creating a fully redundant OSC stream. On QLab 5 you can target multiple devices.

Lighting

Consoles and Dimmers

- ETC Eos Ti lighting console (System Backup as default) – *24,576* output count
- ETC Eos RPU3 Remote Processor Unit (System Primary as default) – 24,576 output count
- Portable Production Case PC w/ ETC Nomad Client with X-Keys 180 keyboard with Ti keypad layout (can be used for show operation)
- All-in-One PC w/ ETC Nomad Client as a designer Remote Viewing Interface/Augmented3D tether.
- ETC Eos iRFR App on Apple iPAD mini for rigging remote purposes.
- ETC Net3 show control gateway for Midi & SMPTE transmit and receiver.
- ETC 2 x 20 universal fader wing

80 x 2.4kw (10A)	ETC Sensor 3 ThruPower* dimmer - (2 x 15A socket outlet)	
302 x 3kw (15A)	ETC Sensor 3 ThruPower* dimmer - (2 x 15A socket outlet)	
90 x 5k (25A)	ETC Sensor 3 ThruPower* dimmer - (1 x 32A CEEform & 2 x 15A Socket outlet)	

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

6 x 16m (flybar length) 24 circuit IWB live overhead with integrated Cat5e line for 2 port DMX gateway. Centered on flybars 5, 15, 25, 35, 45 & 55, these can move up to 10 bars up or down stage to suit show requirements.

Lighting Power Supplies

230V single phase, **50 hertz** onstage and throughout building

Distro at mid-SL 300A total load (Stage level):
overcurrent protection only – no residual current protection

2 x Powerlock (paralleled) 3PNE
1 x 125A CEE form 3PNE
1 x 63A CEE form 3PNE
4 x 32A CEE form 3PNE
4 x 32A CEE form 1PNE
1 x 200A Spur Distro on Mid Gallery-SL:
4 x 32A 1PNE (CEE-form)
24 x 15A 1PNE (All with individual MCB)

Distro at mid-SR 200A total load (Stage level):
overcurrent protection only – no rc protection

1 x 125A 3PNE
1 x 63A 3PNE

Data distribution

There is comprehensive data distribution capability with 60 DMX tie lines throughout the theatre from a centralised patch bay with 2 x 4 port ETC Net 3 gateway and 4 x Swisson 5 port splitter/buffer (RDM compliant).

The same arrangement is available on our LX clearing floor (Mid Gallery SL) for overhead lighting fed from a 8port 1GB POE switch as well as a 2 Port ETC Response MK2 Gateway with each of the 6 IWBs.

ETC Net3/Response MKII 2 & 4 port gateways for DMX distribution & alternate console DMX input (fully configurable)

There are a number of universes for SWT infrastructure systems that must be avoided. These are:

- Universe 1: *House Dimmers,*
- Universe 19: *Venue non-dims,*
- Universe 20: *House Lights,*
- Universe 25: *Working Lights,*

Overall Dimmer Capacity

Front of house outlets are brown phase, **max load 400A.**

Stage overhead outlets are black phase, **max load 2 x 400A**.

Stage level, substage and perch outlets are grey phase, **max load 400A.**

Lighting stock

Please note all fixture counts are full and include any spares. If there are any issues with fixtures on the limit of this stock count, we cannot guarantee replacements.

Profile Units

24 x Robert Juliat 611Sx 1.2kw 11°-26° (Inc. FOH rig)
24 x Robert Juliat 613Sx 1.2kw 28°-54° (Inc. FOH rig)
105 x ETC Source 4 750w bodies (Inc. FOH rig)
30 x ETC Source 4 **LED** Series 2 Lustr (Cyc units can be converted to profiles if required)
20 x ETC Source 4 LED Series 3
50 x 19° ETC Source 4 lens tube (Inc. FOH rig)
50 x 26° ETC Source 4 lens tube (Inc. FOH rig)
50 x 36° ETC Source 4 lens tube
20 x 36° ETC Source 4 EDLT lens tube (primarily for Series 3 units)
30 x 50° ETC Source 4 lens tube
20 x 14º ETC Source 4 lens tube

Units may be exchanged from Bridge 2/3 if preferred

Profile Accessories

We hold a stock of Irises, top & half hats, gobo holders and LED diffusers to fit the above

Wash Units

30 x Robert Juliat 329HPB 2.5kw PBs (Pebble Convex) 7°-49°
54 x Robert Juliat 310HF 1.2kw Fresnels 8°-53° (plus additional Fresnel lenses)
12 x Robert Juliat 310HPC 1.2kw PC 8°-53° (plus additional clear PC lenses)
16 x GLP Impression X4 Bar 20 **LED** batten (optional diffuser lens)
4 x Strand Bambino 5kw Fresnel 14°-48°
2 x Strand Pollux 5kw Fresnel 11°-62°
2 x Robert Juliat Cin'k 350 LFV 5Kw Fresnel 11-62°

Par Units

50 x Par64 1kw (40 with braced arms) CP60 / CP61 / CP62 / EXG available (enquire for current quantities)

N.B. *Due to the current scarcity and rapidly increasing cost of PAR lamps, we are encouraging the use of alternate light sources where possible. In some circumstances, use of PARs as generic wash units may be refused and/or subject to additional costs to the Company.*

Flood Units

22 x ETC Source 4 **LED** Series 2 Lustr with Cyc lens
6 x Selecon Lui 1kw asymmetric single cell flood units

Follow Spots

3 x Robert Juliat Cyrano 1015BSM 2.5kw HMI profile with electronic ballasts.
Spots are rigged on a track system on Bridge 3 & have optional DMX control of the mechanical dimmer.

N.B. *Use of follow spots will incur a recharge cost for the duration of the lamps usage.*

Miscellaneous

40 x 10m ES pendent fitting
8 x Festoon (please ask for details)

Effects

2 x Base Hazer Pro machine (functions exactly as Look Solutions Unique 2.1)
1 x JEM ZR22 DMX smoke machine
2 x JEM AF1 MkII DMX fans

N.B. *Use of Hazers/Smoke Machines will incur a charge for use fluids.*

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

Par20 Birdie	80mm²
ETC S4 19/26/36/50°	160mm²
Robert Juliat 611sx Profile	180mm²
ETC S4 14/70/90° Profile	190mm²
Robert Juliat 613sx Profile	215mm²
Robert Juliat 310 Fresnel/PC	215mm²
Robert Juliat 329 PC	245mm²
Par64	250mm²
Selecon Lui flood	265 x 203mm
Aramis Followspot	272mm Ø
Strand Bambino 5k Fr	325mm Ø
Robert Juliat Cin'k 5k Fr	333mm Ø
Arri 2.5k HMI Fresnel	330mm Ø
Strand Pollux 5k	405mm Ø

Lighting Rigging Equipment

7 x 16m lighting bars with 4 x 6-way IWB (15amp - 24 circuits per bar), can be rigged on any fly bar.
(6 are permanently patched to house dimmers, 1 plugged up as & where needed)

12 x Doughty boom bases
10 x 3.2m black 48mm aluminium scaffold pipe
6 x 2.7m Black Aluminium Scaffold pipe
40 x Doughty Black 500mm De-rig arms
50 x Doughty Black 250mm De-rig arms
2 x 3m mobile lighting stands
4 x 2.5m lighting stands

*IWB = internally wired bar

Front of House Default Rig

(Pre-rigged, plans available online at Sadler's Wells Theatre - Technical Specifications)

Bridge 3	16 x 19° ETC Source 4 750kw fixed beam profile
Bridge 2	16 x 26° ETC Source 4 750kw fixed beam profile
Proscenium booms	6 X Robert Juliat 611Sx 1.2kw 11°-26° zoom profile (3 per side)
	6 X Robert Juliat 613Sx 1.2kw 28°-54° zoom profile (3 per side)

Rigging Positions (Non-flown)

Rigging positions for fixtures are located throughout the auditorium and fly tower areas, please refer to our stage plan (AutoCAD) for accuracy.

Equipment should only be rigged on bars that are labelled with a SWL. Generically, most rigging points such as circle front rails, overhead rails and stage wing rails are rated to **50kg/m**. Any 'alternative' rigging should be discussed with the Head of Department or Technical Manager.

House Lighting

The auditorium lighting is LED (predominantly GDS ArcSystem). This is operated through ETC Paradigm controls or from Eos Console (sACN U20) with a specific proportioned patch. The houselights use Wi-Fi for secondary control and are on channels 1, 12 & 13. If you are using Wi-Fi in your production, please inform Sadler's Wells which channels you will be using.

The minimal lighting levels suitable for emergency lighting have been agreed and licensed by the local authority. We cannot fully extinguish the emergency lighting (this includes green 'running man' fire exit signs) for any performance however this lighting level is dimmed very low and suitable for onstage blackouts.

The house light level as the audience enter has also been agreed by the local authority and for the safety of the audience cannot be adjusted to a lower level while audience are entering/exiting pre and post-show.

House Tab Warmers

The house tabs are a multi-layered fabric curtain with a mid-split for bows that is used guillotine style. It has a grey gauze top layer covering red fabric behind which can be lit to suit the production and will reflect the chosen colour. The theatre carries permanently rigged 'tab warmers' (6 x ETC Colorsource Spot DB). Visiting production can choose to light it differently, however whenever the house curtain is lowered in front of an audience it must be lit, this includes curtain calls. The company may select colours and suitable light levels when plotting lights for any performance. If the company fails to plot these then Sadler's Wells will arrange house curtain lighting at its discretion. There is no obligation to use the house curtain.

Auditorium Ceiling/Side Panels

The auditorium's ceiling and side walls are made of neutral grey perforated metal panels that respond to coloured lighting and act as projection screens for gobos and colour. The colours and levels for the lighting for these auditorium panels are pre-set and are neutral. Visiting companies may select colours or patterns which are acceptable to Sadler's Wells

Outside broadcasts

Outside Broadcast routes: both horizontal and vertical allow access to all levels of the auditorium, the control boxes, stage and orchestra pit. Power and data points at OB entrance on Arlington Way (behind the theatre).

RCD & Overload Protection
<u>200AMP Total Supply</u>

<u>OB Distro (Arlington way OB route):</u>

- 1. x Set of Powerlock Outlets
- 1. x 125A TPNE CEEform Socket Outlet
- 1. x 63A   TPNE CEEform Socket Outlet
- 1. x 32A   SPNE CEEform Socket Outlet
- 2. x 16A   SPNE CEEform Socket Outlet

Sound

Sound Power

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

Sound distro mid-SL & mid-SR: Each has 1 x 63A / 1 x 32A / SPNE CEEform (total load across sound distros cannot exceed 200A)

Orchestra Pit Sound Power (SR): 1 x 32A / 1 x 16A SPNE CEEform

FOH Sound Power (Behind mix position): 1 x 32A / 1 x 16A SPNE CEEform

Loudspeaker system

Main PA	Model	Qty
Stalls L&R -	D&B E12	(2)
1st Circle L&R -	D&B E12	(2)
2nd Circle L&R -	D&B E12	(2)
Centre Cluster -	D&B E12	(2)

Subs:		
Stalls L&R -	D&B B2	(2)
1st Circle L&R -	D&B 27s (B4 Cardioid Subs) *Fixed Position	(2)
2nd Circle L&R -	D&B 27s (B4 Cardioid Subs) *Fixed Position	(2)

Delays:		
Stalls Row 1 -	D&B E6	(6)
Stalls Row 2 -	D&B E5	(6)
1st Circle Row 1 -	D&B E6	(6)
1st Circle Row 2 -	D&B E5	(6)

Fills:		
Front Fill	D&B 44s	(8)
Stalls L&R -	D&B E3	(2)
2nd Circle L&R -	D&B E3	(2)
2nd Circle from Bridge	D&B E12 (L,C,R)	(3)

Surrounds:

D&B E0:   (12)
    - 4x in Stalls (Side L,Side R, Rear L, Rear R)
    - 4x in 1st Circle (Side L,Side R, Rear L, Rear R)
    - 4x in 2nd Circle (Side L,Side R, Rear L, Rear R)

(All powered by D&B 5D Amplifiers with default system timings and full control via R1 Software)

Monitors

Monitoring	Model	Qty
Wedge Monitors	D&B Max 2 (15")	(4)

Additional speakers

Please check with Head of Sound & Video for availability of additional speakers.

Audio Processing

3 x Yamaha MTX5D matrix processors for routing, and speaker settings comprising of:

48 Dante Inputs, 48 Dante Outputs
3 MY16AE Cards for AES Signal to all amps

Macbook Pro & iPad Air for wireless control of all audio system software.
Windows 10 PC (Rack mounted in Amp Room) running the following software:
- D&B R1
- MTX Editor
- Dante Controller
- R-Remote
- CL Editor

Mixers

1 x Yamaha CL5
- 72 mono + 8 stereo
- 24 mix busses / 8 matrix / LCR out
- 1 x Dante MY16 AUD Card
- 1 x MY8 - AD96 Card allowing an additional 8 analogue inputs (line level)

Main mixing position is the rear of the stalls by removing seats S,T,U 15-20 to create an area of **2.8m wide x 2.4m** deep. A secondary position is in the Sound Control Room rear of 1st circle with an opening window, please enquire if use of this room is required.

Network I/O

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

2 x Yamaha Rio1608-D
1 x Yamaha Rio3224-D
1 x Yamaha Ri8-D (Installed in Radio Mic Rack)
1 x Yamaha RMio64-D for MADI – Dante Conversion
1 x Klark Teknik DN950 Network Bridge for AES – Dante Conversion (Cased with RMio64-D)
1 x Ferrofish A32 DANTE AD/DA converter (Installed in Jackfield in Sound Control Room)
4 x Dante AVIO 2Ch. Output Adapter
1 x Dante AVIO 2Ch Input Adapter
3x Dante AVIO 2Ch AES I/O Adapter

Playback

1 x Playback Rack (installed together) consisting of:

- 2 x Apple Mac Mini 2020 M1 Chip, 8 Core CPU, 8 Core GPU, 16GB Memory, 256GB SSD (master/backup KVM Switch) running Q Lab 4
- 1x RME Digiface Dante (Main Playback machine).
- 1 x That Little Box Dual USB Go Button
- 1 x APC Smart UPS for computing equipment

Microphones

Please contact Head of Sound & Video for microphone list and accessories.

Additional Sound Equipment

1 x Apple Mac Mini 2020:
    Processor: Apple M1 Chip, 8 Core CPU, 8 Core GPU
    Memory: 16GB
    Storage: 1TB SSD

1 x Apple MacBook Pro 2020:
    Processor: Apple M1 Chip, 8 Core CPU, 8 Core GPU
    Memory: 16GB
    Storage: 1TB SSD

1 x MacBook Pro 13-inch, Early 2015
    Processor: 2.9 GHz Dual-Core Intel Core i5
    Memory: 8 GB 1867 MHz DDR3
    Graphics: Intel Iris Graphics 6100 1536 MB

2 x CalDigit USB-C HDMI Dock (USB-C/Thunderbolt 3/4)
1 x Plugable USB-C & Thuderbolt 3 Dual Display Dock
1 x iPad Air
1 x Focusrite Scarlett 18i20 USB Soundcard
1x RME Fireface UC USB Audio Interface (up to 8 analogue I/O)
2 x Rosendahl MIF4 Timecode Interface

Orchestra Chairs and RAT Stands

- 60x Orchestra chairs
- 55x RAT orchestra music stands (Halogen)

Wireless Systems

Wireless UHF Equipment

Sadler's Wells currently holds a license for use of radio mic equipment in Channel 38 + 40. This license is for all in-house radio mics onsite.

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.

Please note that Sadler's Wells also utilise licensed wireless communications across interleaved spectrum in Channels 22, 27, 43, 44 and 45.

More details can be found in the Radio and Wi-Fi Policy (Appendix F)

Radio Mics

1 x Radio Rack (installed together) consisting of

- 1 x Shure AD4Q Four-Channel AXIENT Digital Wireless Receiver
- 4 4 Shure ADX1M micro Body Pack transmitters (LEMO)
- 4 x Shure AD2-58 Hand Held Transmitters
- 2 x Shure UR4D+ (4 Channels of RF)
- 4 x Shure SM58 Wireless Handheld
- 4 x Shure UR1M Beltpacks (TA4F)

Handhelds and belt packs share the same frequencies. Additional channels may be available upon prior request.

Communications

Wired Intercom

Clear-Com HelixNet Digital Party-line System:

- 10 x HelixNet 2ch Beltpack
- 10 x ClearCom CC-300 Headset
- 1 x HelixNet 4ch Remote Station (Built-in to Prompt Desk)
- 4 Wire intergration to wireless intercom. 4 Channels
- 2 Wire 2ch I/O for visiting company use
- ClearCom PK-7 Power Supply for visiting company use

Wireless Intercom

Riedel Bolero Wireless System 1.9Ghz:

- 7 x 6 Key Bolero Beltpack
- 15 x PunQtum 910 Lightweight headset
- Backstage Paging integration from beltpack

Cue lights

- 8 x Patchable Cue Lights + 4 x Fixed Locations (Built into Prompt Desk)

Paging & Show Relay

QSC Q-Sys Paging system with full processing and relay distribution to all dressing rooms. Paging locations:

- Prompt Desk
- Downstage Right
- Downstage Left
- Stalls Production Desk Point
- 1st Circle Production Desk Point
- Lighting Control Room
- HelixNet Remote Station (Built Into Prompt Desk) through headset.
- Bolero Wireless Intercom Beltpack

Prompt Desk

The Prompt Desk can be located either DSL or DSR and contains the following equipment:

- 3 x 10" Colour Monitors (SD)
- Show Relay Speaker
- Stalk Lights
- Stopwatch
- HelixNet 4ch. Intercom Station
- Cue Light rocker switch control panel
- Paging Station 4 Zones: *(programable)*
  - SWT Dressing Rooms
  - SWT Foyer
  - SWT Control Rooms
  - SWT Bar Bells

Elements of the prompt desk can be used in the auditorium & other areas, please discuss in advance of specific requirements.

Cameras and Video Relay

(Signals from the cameras can be routed to most locations within the theatre in either SD or HD)

1 x HD Colour CCTV camera rigged on 1st Circle Rail. Default patched to the following locations:
- o DSM position
- o Stage Left Wing
- o Stage Right Wing
- o LX Control Room
- o Fly floor
- o Stage Door
- o All Dressing Rooms

1 x B&W SD Low Light CCTV camera rigged on 1st Circle Rail. Default patched to the following locations:
- o Prompt Desk
- o Fly Floor

1 x IR Emitter rigged on 1st Circle Rail offering true blackout view of stage.

Additional CCTV equipment

Please contact Head of Sound & Video for the availability of additional monitors, cameras & signal distribution.

Surtitling System

Please contact Head of Sound & Video for the availability of availability of in-house equipment or to arrange for additional requirements.

Video Projection

Computers

Video Playback System Consisting of:

- 1 Quad-Core and Dual GPU Mac Pro *(Late 2013)*
- Processor: 3.7 GHz Quad-Core Intel Xeon E5
- Memory: 12 GB 1866 MHz DDR3
- Graphics: AMD FirePro D300 2 GB

Various display adaptors available for most common signal connectors. Additional Apple Macs listed above in **Additional Sound Equipment**.

Signal Infrastructure

- Full Multimode Fibre patch throughout the theatre on Neutrik OpticalCON Duo LC connectors.
- BNC Composite Video Tielines *(Not rated to carry SDI signals, require re-clocking)*
- BNC VDA in basement comms room

Signal Equipment

- 2 x Blackmagic Teranex MINI HDMI to Optical
- 2 x Blackmagic Teranex MINI Optical to HDMI
- 2 x Blackmagic Micro Bi-Directional HDMI/SDI Converter
- 2 x Blackmagic Micro SDI – HDMI Converter
- Startech 4 Port HDMI Switch. 4 HDMI in, 1 HDMI Out *(with remote)*

Various HDMI, BNC, DVI, VGA, FIBER Cables in stock. For long signal runs, please enquire.

Additional Display Equipment

Please contact Head of Sound & Video for the availability of additional display equipment & signal distribution.

Sadler's Wells Theatre does not own a projector; this will need to be hired and lens specified based on throw calculations.

Front of House Projector Position

There is a projection shelf that can be installed in the middle front of the 1st or 2nd circle rail. This must be requested in advance; it is removed when not in use and will need to be installed for your production. A further 2 projector shelves are available but can only be installed in certain areas on the circle rail, please discuss in advance.

Additional clearance at the back of the shelf for cable and venting is minimal. Please be aware that heat and noise from any projector on this shelf will be felt by those seats directly behind, and this may impact on the enjoyment of these patrons in particular. Low noise laser models only should be used.

There is a maximum total load of 100kg permitted on the Projector shelves

Approved projector models for use on our circle rail shelves:

<u>Panasonic PTRR25K</u> Approx. 550 x 220 x 570 mm
<u>Panasonic PTRZ21K</u> Approx. 598 x 270 x 725 mm
<u>Panasonic PTRQ35K</u> Approx. 598 x 353 x 780 mm
<u>Panasonic PTRZ34K</u> Approx. 598 x 353 x 780 mm

Other models to be discussed with the Head of Sound & Video prior to booking

The projectors mentioned above MUST be fitted with a flying frame to allow for a safety bond to be installed.

Please contact SWT Head of Sound to discuss projection requirements.

Front of House Video Tie Lines

3 x Neutrik OpticalCon Duo LC Tielines on 1st Circle rail
2 x Neutrik OpticalCon Duo LC Tielines on 2nd Circle rail
2 x Cat5E Tielines on both circle rails.

On-Stage & Overhead Projection

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.

On-Stage & Overhead Video Tie Lines

Neutrik OpticalCon Duo LC Tielines in following locations: *(Multimode)*
2 x Downstage Right
2 x Downstage Left
2 x Midstage Right
2 x Midstage Left
2 x Upstage Right
2 x Upstage Left
2 x Fly Floor Stage Right
2 x Fly Floor Stage Left

Assisted Listening & Audio Description

Sadler's Wells uses a Sennheiser RF system for delivering live audio description and a feed of the in-house relay microphones.

It utilises the following frequencies:
Channel 1 (Live Audio Description) 863.124 MHz
Channel 2 (Show Relay) 863.476

Contact the Head of Sound for Stethosets availability.

Access Equipment

Tallescope

We use a model 50524 Tallescope.

Genie Lift

We also have use of a Genie AWP 30S (this should be requested in advance, other venue users may have priority. Proof of IPAF certification is required by all users.)

Ladders

Additionally the following ladders are available for use onstage:

   1 x Zarges Light-alloy multi-function ladder, 3 x 14 rungs Z600 - 41524
   1 x Zarges Light-alloy push-up ladder, 3 x 10 rungs Z600 - 40128
   2 x Zarges Light-alloy stepladder with treads, 10 treads Z600 - 41230
   1 x Zarges Z500 telescopic multi-function ladder, 4-part - 41196

   6 x Small A frame aluminium ladders of varying sizes

Wardrobe

Wardrobe equipment

- 3 x Domestic Washing Machines
- 1 x Domestic Tumble Dryer
- 1 x Industrial Tumble Dryer
- 1 x Drying Cabinet
- 1 x Spin Dryer
- 1 x Sewing Machine
- 1 x Overlocker
- 5 x Ironing Boards
- 2 x Steam Irons
- 2 x Domestic Irons
- 4 x Upright Clothes Steamers
- 12 x Costume Rails
- 2 x Full Length Mirrors on stands
- 6 x Hair Dryers

Dressing Rooms

A dedicated quick-change room is at stage level accessed through the stage right exit. Other on-stage temporary facilities by request.

All dressing rooms have lockers or small cupboards which can be secured with a small padlock (please provide your own).

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.

All dressing rooms have step-free access.

Room	Floor	Capacity	Notes
1.1	1	3	1 x toilet and shower
1.2	1	7	2 x sinks and showers
1.3	1	4	1 x toilet and shower
1.4	1	4	1 x toilet and shower
1.5	1	4	1 x toilet and shower
1.6	1	5	1 x toilet and shower (fully accessible)
1.7	1	10	1 x sink
2.1	2	12	3 x sinks and showers
2.2	2	16	3 x sinks and showers
2.3	2	10	1 x sink
2.4	2	9	2 x sinks and showers
B1	SB	1	1 x sink and shower
B2	SB	7	2 x sinks and showers
B3	SB	15	
B4	SB	30	

Additional showers and toilets are available on all levels.

APPENDIX A
Safe System of Work - Power Flying System

- There is an **Emergency Stop** button located in each corner of the fly tower at every level, including the stage 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. The cross-stage bars themselves weigh approximately 200kg.

- 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 1st 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 600kg 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
Code of practice for get-ins and get-outs: local residents

Sadler's Wells Theatre and the Lilian Baylis Studio are situated in residential areas. It is essential to the nature of our business that we sometimes have to work late at night or during the early hours of the morning (unsociable hours for noise disturbance). We recognise the importance of good relations with our neighbours and are committed to developing and maintaining them.

This Code of Practice will be followed by all staff employed by Sadler's Wells Trust. We will also endeavour to ensure that staff employed by visiting companies or their agents follow it.

Sadler's Wells Trust does not own or operate any vehicles, but drivers of vehicles owned by visiting companies or their agents will be asked by Sadler's Wells staff to:

- Move their vehicles if they are seen to be blocking entrances to residential properties

- Move their vehicles if they are seen to be parked directly in front of any residential property in Arlington Way or blocking reasonable access for other large or emergency vehicles.

- Turn off their engines whilst parked in Arlington Way and Rosebery Avenue, particularly if any residents inform our staff that the engines have been left running.

- Keep truck movements, including all arrivals and departures, to a minimum in Arlington Way during unsociable hours

In addition:

- Theatre staff and staff working for visiting companies will be asked to work quietly whilst in Arlington Way, and to furthermore work quietly in Rosebery Avenue during unsociable hours.

- All staff must comply with the Sadler's Wells Code of Practice for loading and unloading of vehicles.

- All complaints from neighbours will be dealt with courteously. Wherever possible, the cause of the complaint will be dealt with immediately. A report of the complaint will be made to Sadler's Wells Director of Visitor Experience by the member of staff who dealt with the complaint.

- Any suggestions, from staff or from residents, regarding amendments or improvements to this code of practice will be passed to the Chief Operating Officer for consideration.

APPENDIX D
Safe System of Work for Stage

Whilst unloading/loading wagons you must:

- Wear protective footwear.
- Hard hats should be worn when working inside the back of the wagons.
- Wear high visibility jackets. Jackets are stored Stage left by the dock door.
- 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 and traffic.
- At night ensure adequate lighting is provided.

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 is 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 people are working 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 in the basket of the Genie or Tallescope (or ladders) 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.

Whilst using the orchestra pit lifts you must:

- Wear protective footwear.
- Have a full time member of staff in control of the remote for the lifts.
- Always have the red rope across the front of the stage.
- Ensure side barriers are down and locked off.
- If using more than one lift to transport goods; always make sure that no item is across two lifts, as the lifts are unpredictable and can sometimes go out of sync from one other.

Personal Protective Equipment

- The PPE cabinet is located stage right, the equipment is there for anyone to use.

APPENDIX E
Hanging Plot

Side Bars: SR		Bar	From Datum Line (mm)	Notes/Scenery	Side Bars: SL	
75	73	72	14980		74	76
		71	14780			
		70	14580			
		69	14380			
		68	14180			
		67	13980			
		66	13780			
		65	13580			
		64	13380			
		63	13180			
		62	12980			
		61	12780			
		60	12580			
		59	12380			
		58	12180			
		57	11980			
		56	11780			
		55	11580			
		54	11380			
		53	11180			
		52	10980			
		51	10780			
		50	10580			
		49	10380			
		48	10180			
		47	9980			
		46	9780			
		45	9580			
		44	9380			
		43	9180			
		42	8980			
		41	8780			
		40	8580			
		39	8380			
		38	8180			
		37	7980			
		36	7780			
		35	7580			
		34	7380			
		33	7180			
		32	6980			
		31	6780			
		30	6580			
		29	6380			
		28	6180			
		27	5980			
		26	5780			
		25	5580			

		24	5380	
		23	5180	
		22	4980	
		21	4780	
		20	4580	
		19	4380	
		18	4180	
		17	3980	
		16	3780	
		15	3580	
		14	3380	
		13	3180	
		12	2980	
		11	2780	
		10	2580	
		9	2380	
		8	2180	
		7	1980	
		6	1780	
		5	1580	
		4	1360	
		3	1120	
		2	940	
		1	750	
		300	600	**House hard legs - PERMANENTLY RIGGED**
		200	500	**House hard border - PERMANENTLY RIGGED**
		100	245	**House Curtain - PERMANENTLY RIGGED**
			0	**SAFETY CURTAIN - DATUM LINE**
		101	1035	**House Speaker Centre Cluster - PERMANENTLY RIGGED**
		102	1350	**Architectural panels - PERMANENTLY RIGGED**
		103	1600	
		104	2710	
		105	2855	
75	73	106	3160		74	76

APPENDIX F
Radio and Wi-Fi Policy

Sadler's Wells Theatre 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 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

- 462MHz
- 469MHz

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

Wireless Microphones

- 606 – 614MHz (Channel 38)
- 622 – 630MHz (Channel 40)

Sadler's Wells uses Shure UHF-R units around the site at Rosebery Avenue. Incoming companies requiring the use of frequencies within this band 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.

Wireless Microphones

863-865 MHz (Channel 70)
Sadler's Wells uses microphones in this frequency band in the front of house areas. If required, and with prior warning, Sadler's Wells will endeavour to not use these units at the time you require. Incoming users are advised that as this is a de-regulated spectrum, outside interference may affect any use of this bandwidth, and show-critical uses of this bandwidth are therefore not recommended.

Performance Radio Comms

1880-1900Mhz (1.9Ghz)
Sadler's Wells uses Riedel Bolero wireless comms for its show communication system, this works within the 1.9Ghz DECT License free spectrum, antenna's cover most of the building including the Lilian Baylis Theatre.

There are 15 comms packs available within the current system, but more can be hired based on requirements. Companies presenting a show/event in Sadler's Wells Theatre will be able to utilise these comms units but should expect that at least the Duty Technician and Fly's Technician (minimum) will require these units.

Please note the Bolero system is for the sole use of the SWT Theatre, not the LBS. Should this be required then we would need to know in advance of your visit by contacting the theatre's Technical Manager

APPENDIX G Sadler's Wells (Angel) Licensed Radio Spectrum Usage

Frequency (MHz)	UHF Channel	Type	Group / Band	NOTES. Last updated: February 2021 (MN)
462.768	20	Walkie- Talkie		Building Radios
462.793	20	Walkie- Talkie		Building Radios
462.881	20	Walkie- Talkie		Building Radios
462.918	20	Walkie- Talkie		Building Radios
469.556	20	Walkie- Talkie		Building Radios
469.631	20	Walkie- Talkie		Building Radios
469.731	20	Walkie- Talkie		Building Radios
469.918	20	Walkie- Talkie		Building Radios
606.825	38	Radio Mic	K4E	
607.250	38	Radio Mic	K4E	
607.975	38	Radio Mic	K4E	Shared license - LBS & SWT CH. 38
608.900	38	Radio Mic	K4E	
610.350	38	Radio Mic	K4E	
611.175	38	Radio Mic	K4E	
624.375	40	Radio Mic	K4E	
625.300	40	Radio Mic	K4E	
627.275	40	Radio Mic	K4E	
627.825	40	Radio Mic	K4E	SWT Shares CH. 38 with LBS
628.925	40	Radio Mic	K4E	SWT priorities the use of CH. 40
622.600	40	Radio Mic	K4E	
629.700	40	Radio Mic	K4E	
622.200	40	Radio Mic	K4E	
823 -826MHz	65			Part of current CH.38 Licence
826 - 832MHZ	66			
863.500	70	Radio Mic		Unlicenced (open) channel - can be retuned in range 863 - 865MHz
1785 - 1785.2Mhz	38			
1785.2 - 1803.6MHz	38			Part of current CH.38 Licence
1803.6 - 1804.8MHz	38			
1804.8 - 1805MHZ	38			

Sadler's Wells (Rosebery Avenue) Licensed Radio Spectrum Usage – Jan 2026