



**HARLEQUIN**

[www.harlequinfloors.com](http://www.harlequinfloors.com)

# Stage Building and Refurbishment



# Harlequin is the world leader in advanced technology floors for dance, performing arts, entertainment and display

Harlequin's reputation is founded on the manufacture and supply of a range of hard-wearing and long-lasting portable and permanent sprung and vinyl floors preferred by dancers and performers at the world's leading venues, from the Royal Opera House, Paris Opera Ballet to the Sydney Opera House.

Forty years after its creation, Harlequin remains the global leader in its field with offices in Europe, The Americas and Asia Pacific.

## Theatre

Theatre professionals demand hard-wearing stages able to withstand the fit-ups, get-ups and rigging required for every performance. Harlequin work with architects and stage consultants to design, build and install bespoke stage systems.

The Met  
ropolitan  
Opera

THE  
KENNEDY  
CENTER



National  
Theatre

北京当代  
芭蕾舞团 BOFi  
BEIJING DANCE THEATER

THÉÂTRE  
NATIONAL  
DE  
chailloT  
DANSE / THÉÂTRE

TEATRO ALLA SCALA

SADL  
ERSW  
ELLS

ROYAL  
OPERA  
HOUSE

TEATR WIELKI  
OPERA  
NARODOWA

ADT  
Australian  
Dance  
Theatre

H  
BIRMINGHAM  
HIPPODROME

The Old Vic





# Case Study

# Royal & Derngate Theatre

## Overview

“ I would like to pass on our gratitude for the work that Harlequin have done on the project. The team’s tireless commitment, sheer graft and willingness to work with us is greatly appreciated. ”

**David Reeve**  
Technical Manager

### Project highlights

<b>Name:</b>	Royal & Derngate Theatre
<b>Location:</b>	Northampton
<b>Project Type:</b>	Theatre stage refurbishment
<b>Building Type:</b>	Theatre auditorium
<b>Product Type:</b>	Harlequin Stage System / Harlequin Standfast
<b>Product Timescale:</b>	3 weeks

The Royal & Derngate Theatre is a multi-purpose space which can be configured for a variety of performances. Harlequin’s stage refurbishment project was the first restoration undertaken since 2005 when the theatre was first re-developed.



# Royal & Derngate Theatre

## The requirement:

Complete stage refurbishment and new stage surface.

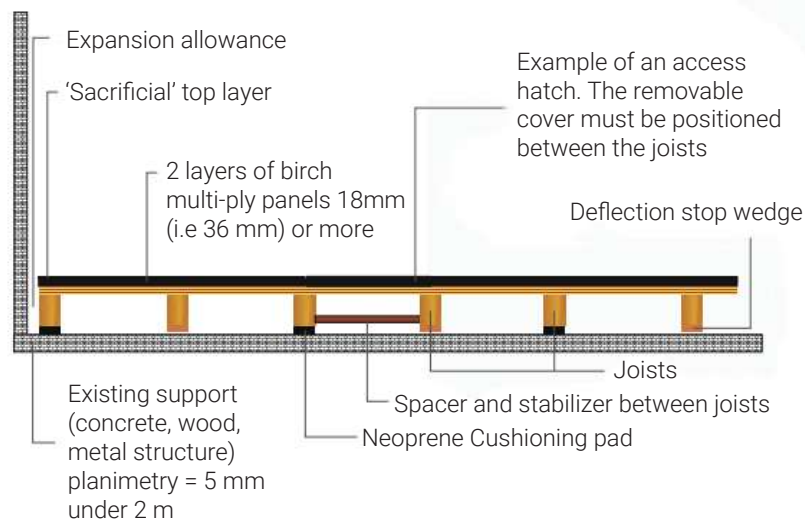
## The solution

A comprehensive multi-layered Harlequin Stage System. Harlequin fitted new battens to strengthen the stage over which a further double-layer of wood ply was installed. The stage surface was finished with a black Harlequin Standfast vinyl performance floor.

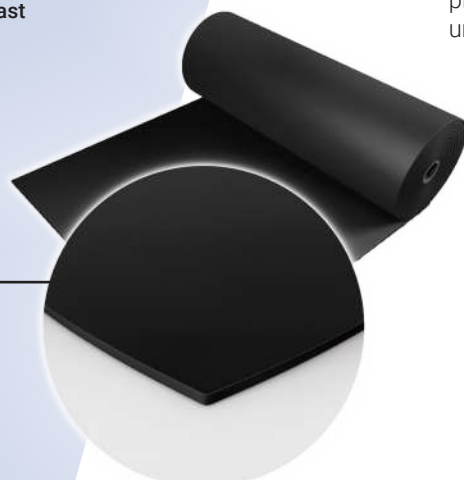
The complete refurbishment project covered the entire stage area incorporating wings, lifts, orchestra pit and retractable removable seating.



## Cross section of the Harlequin Stage System



Harlequin Standfast (Black)



Homogeneous PVC with a slip-resistant performance surface



# Case Study

# Guildhall School of Music & Drama

## Overview

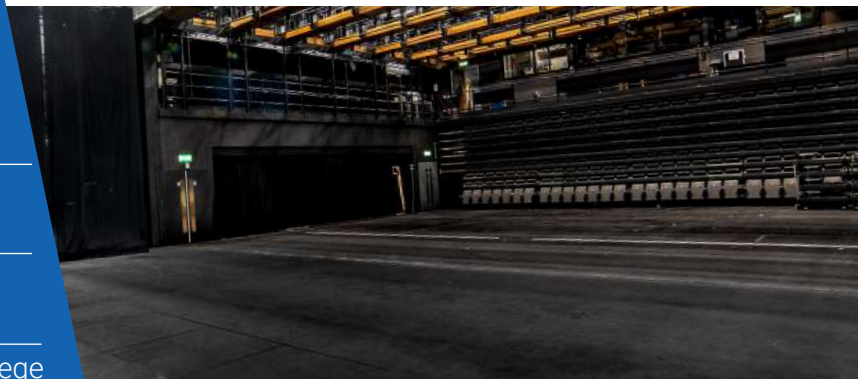
The stage for the Silk Street Theatre in the Barbican Centre London was first installed in 1986. Harlequin's refurbishment project included a demountable centre section; an orchestra lift which drops 30 feet and balustrade; new auditorium flooring and wings; a row of 28 original cloth traps to the back of the stage and dip traps to the sides.

“ There was a very tight timescale on the project and considerable challenges to achieve a level finish suitable for the various stage configurations, incorporating lifts, rising balustrades, floor vents and the like. Harlequin was proactive in identifying solutions and the project was completed on time and achieved the stage strengthening objective with considerable improvement to the aesthetic appearance. ”

**Hannah Bibbins**  
Senior Project Manager Barbican

## Project highlights

<b>Name:</b>	Guildhall School of Music & Drama
<b>Location:</b>	Silk Street Theatre, Barbican Centre, London
<b>Project Type:</b>	Black Box theatre stage refurbishment
<b>Building Type:</b>	Higher education/Music College
<b>Product Type:</b>	Harlequin Stage System
<b>Product Timescale:</b>	3 weeks



# Case Study

# Guildhall School of Music & Drama

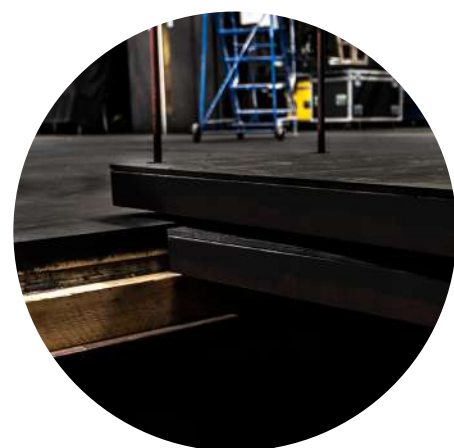
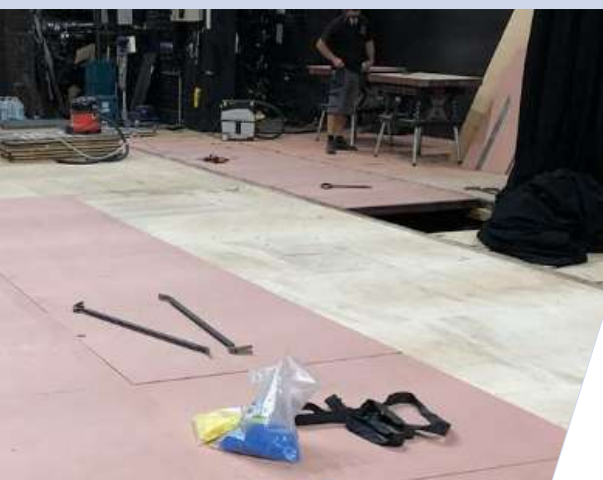
## The requirement:

A new Harlequin Stage System incorporating existing features including cloth traps, dip traps, orchestra pit and balustrade, hardwood edging, accessible cable run with lids and bespoke centre-line.

## The solution

Harlequin meticulously removed the top surface in sections to investigate the build ups from decades of patch-repairs and paint layers to diagnose what was required:

- removal of the existing top surface back to the joists
- replacement of damaged joists
- installation of new fire retardant ply
- bespoke made-to-measure covers for 28 cloth traps
- hardwood edge trims for dip traps
- new demountable top surface to centre of stage
- new centre-line stage demarcation installed
- new front hardwood safety edge installed
- sacrificial layer painted with black stage paint





## Case Study

# UAL Central Saint Martins

### Overview

The University of the Arts London Saint Martins £200m Kings Cross campus accommodates 4,000 students and 1,000 staff. The three-storey building designed by award winning architects Stanton Williams contains four levels of multi-purpose workshops, specialist studios and a public theatre.

Central Saint Martins College of Arts and Design is the leading centre for teaching and research in arts and design.

## Project highlights

<b>Name:</b>	Central Saint Martins College of Arts and Design
<b>Location:</b>	King's Cross Campus London
<b>Project Type:</b>	Performance spaces - 1,656m <sup>2</sup>
<b>Building Type:</b>	Higher education
<b>Product Type:</b>	Harlequin Activity / Harlequin Cascade
<b>Architect:</b>	Stanton Williams
<b>Contractor:</b>	Bam Construction Ltd / Overbury
<b>Theatre consultant:</b>	Drama by Design



# Case Study

# UAL Central Saint Martins



## The requirement

Flexible performance spaces within Central Saint Martins College of Arts and Design new centre for the Performing Arts.

## The solution

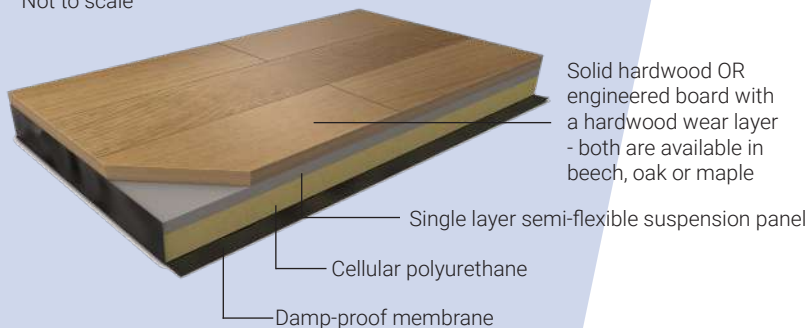
A **Harlequin Activity** sprung floor system was installed in four state-of-the-art performance spaces at the King's Cross campus.

The bespoke floor in the 348 seat Platform Theatre was customised to accommodate an orchestra pit and to include a section of floor which could be manually lowered and raised when required.

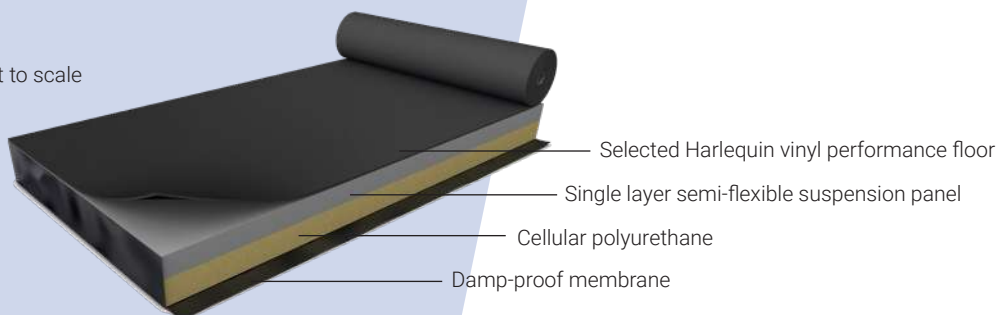
The project included:

- 351m<sup>2</sup> **Harlequin Activity** sprung floor system installed with a Weitzer Parquet Oak top surface
- 110m<sup>2</sup> and 68m<sup>2</sup> **Harlequin Cascade** vinyl performance floor installed in two multi-purpose workspace spaces
- 68m<sup>2</sup> **Harlequin Activity** sprung floor finished with engineered maple for the Studio Theatre space
- **Harlequin Activity** sprung floor system was specified, supplied and installed for six additional rehearsal spaces

Not to scale



Not to scale



## About Harlequin Activity™

**Harlequin Activity** is a permanently installed sprung floor system, based on the well-established 'triple sandwich' construction originated by Harlequin over 30 years ago. It is a fully-floating system with no fixings to the sub-floor and can be laid on any reasonably smooth and flat surface without prior preparation.

**Harlequin Activity** is shock-damped to avoid a 'trampoline' effect and to offer identical characteristics across the whole floor. It is an 'industry standard' choice with many hundreds of installations worldwide, effectively reducing injuries to both teachers and performers.

**Harlequin Activity** is installed by our own high-skilled technical team and all work is fully guaranteed.

Different surface options include:

- A Harlequin vinyl performance floor, selected from our range
- Engineered board with a hardwood wear layer in beech or oak
- Solid hardwood - in a range of options





## Case Study

# Chaillot National Dance Theatre

### Overview

“ The right floor is something absolutely essential for theatre and even more so for dance as it ensures the quality of the performance ”

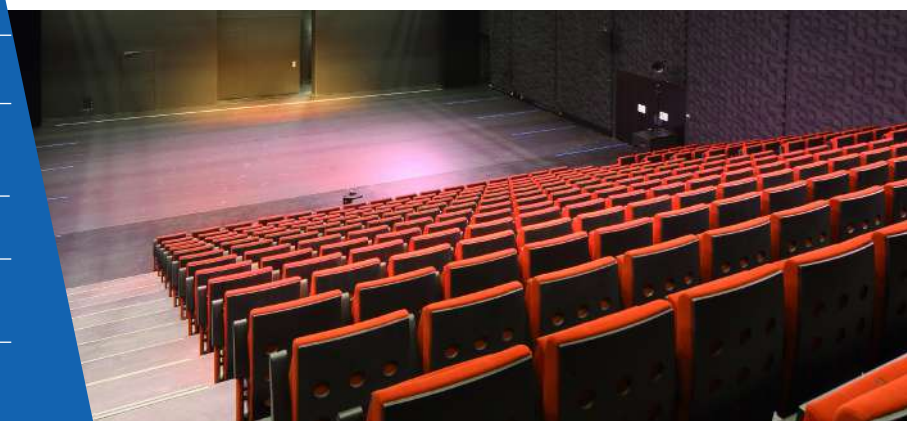
**Didier Deschamps**  
Director

#### Project highlights

<b>Name:</b>	Chaillot National Dance Theatre - Firmin Gémier Dance Studio
<b>Location:</b>	Paris, France
<b>Project Type:</b>	Theatre studio refurbishment
<b>Building Type:</b>	Commercial
<b>Product Type:</b>	Harlequin Stage System - 475 m <sup>2</sup>
<b>Architect:</b>	Brossy & Associés (Paris)

The Chaillot National Dance Theatre is one of the largest theatres for contemporary dance in Paris. A major renovation of the building led by France's Ministry of Culture and Paris architect Vincent Brossy has transformed the Firmin Gémier Studio.

Benot André, secretary general, said to *Télérama*, of the state of the art modification: "It is ultra modular. The stands are retractable. 390 people can be seated. In addition, we have the Rolls Royce floors, with a double cushioning system. Depending on the impact of the dancer on the ground, a first cushioning softens the shock and if necessary a second takes over."

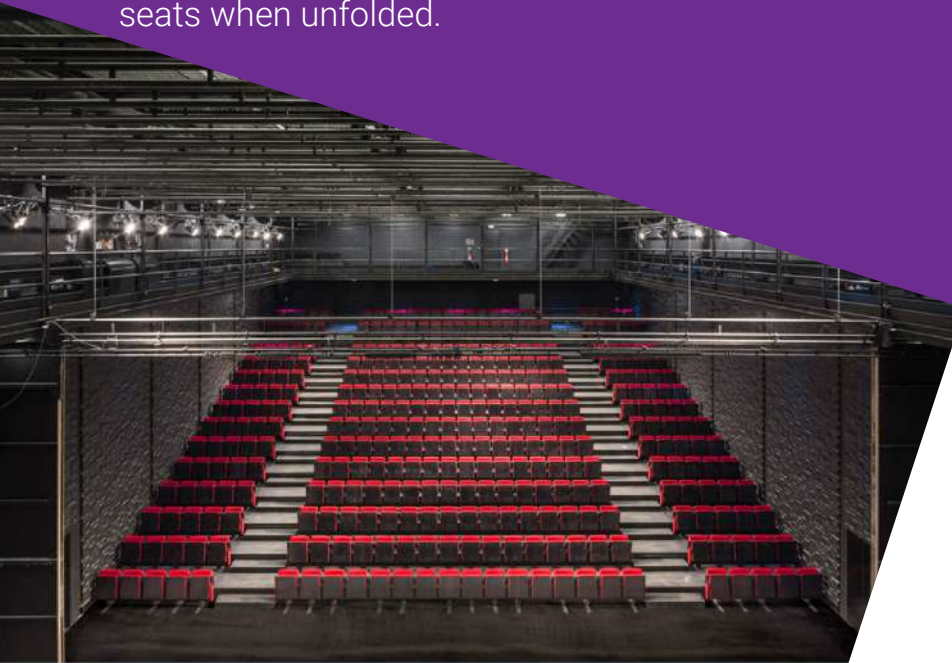


## Case Study

# Chaillot National Dance Theatre

## The requirement:

The theatre required a flexible multi-purpose solution to be realised. This involved retractable seating which could be rolled out and back to be folded away to reveal a stage floor. The floor needed to accommodate performance requirements and withstand heavy loads whilst supporting the weight of the seats when unfolded.



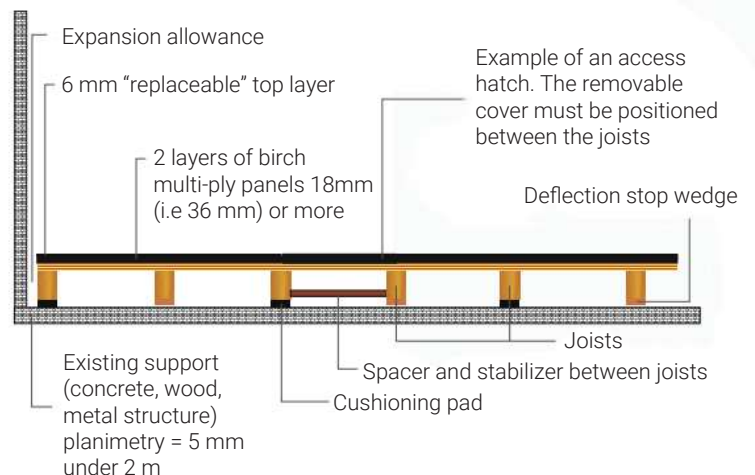
## The solution

To meet all the criteria, Harlequin Floors supplied and installed the 475 m<sup>2</sup> bespoke Stage System comprising sprung floor panels and vinyl dance surface finish.

Whilst each stage is different and may require its own solution, Harlequin use established methods of construction and specially selected materials.

The stage construction itself may be assembled onto an existing concrete base, timber or steel beams, onto which joists are positioned with their centres matched to the requirements for loading and durability. Onto this is laid a durable exterior grade birch plywood topped with the surface selected to fit the needs of the venue. Harlequin work alongside architects and stage consultants to design, build and install stages which will satisfy this need for strength as well as being easy to maintain and flexible with the optional inclusion of dip traps, orchestra pit fillers and provision for trap doors and ballet wagons.

## Cross section of the Harlequin Stage System sprung floor



“ We were looking for a performance floor that has shock-dampening qualities and is the right flexibility for dance but also robust enough because theatre is at the heart of our programming. Harlequin Stage System perfectly meets all these criteria. With impeccable service from Harlequin teams who were very attentive to our needs and respected the commitments made during site meetings and in record time! ”

**Yves Giacalone**  
Technical Director

## Project highlights

<b>Name:</b>	Théâtre National de Marseille La Criée
<b>Location:</b>	Marseille, France
<b>Project Type:</b>	Theatre stage
<b>Building Type:</b>	Public commercial
<b>Product Type:</b>	Harlequin Stage System 380 m <sup>2</sup>

# Case Study

# Théâtre National de Marseille

# La Criée

## Overview

Site of the historic fish market in the old Port - Théâtre National de Marseille La Criée was founded in 1981. Behind the preserved facade, the theatre is venue to contemporary theatre and dance performances in two theatres.



# Case Study

# Théâtre National de Marseille

# La Criée



## The requirement

New theatre stage system in Beech wood with removeable performance top surface.

The 380m<sup>2</sup> theatre stage system needed sound dampening properties, durability and a replaceable top surface for set scenery damage.

380m<sup>2</sup> project.

## The solution

**Harlequin Stage System™** bespoke stage sprung floor system and performance top surface was installed in the 380m<sup>2</sup> stage customised to accommodate specialist technical requirements.

## About Harlequin Stage System

Theatre professionals know how important it is to have a stage that is hardwearing enough to withstand all the fit ups, get outs and rigging that needs to be completed for every show - that will happily accommodate trucks, flats and scissor lifts. Harlequin work alongside architects and stage consultants to design, build and install stages which will satisfy this need for strength as well as being easy to maintain and flexible with the optional inclusion of dip traps, orchestra pit fillers and provision for trap doors and ballet wagons.

## Stage construction

Whilst each stage is different and may require its own solution, Harlequin use established methods of construction and specially selected materials.

The stage construction itself may be assembled onto an existing concrete base, timber or steel beams, onto which joists are positioned with their centres matched to the requirements for loading and durability.

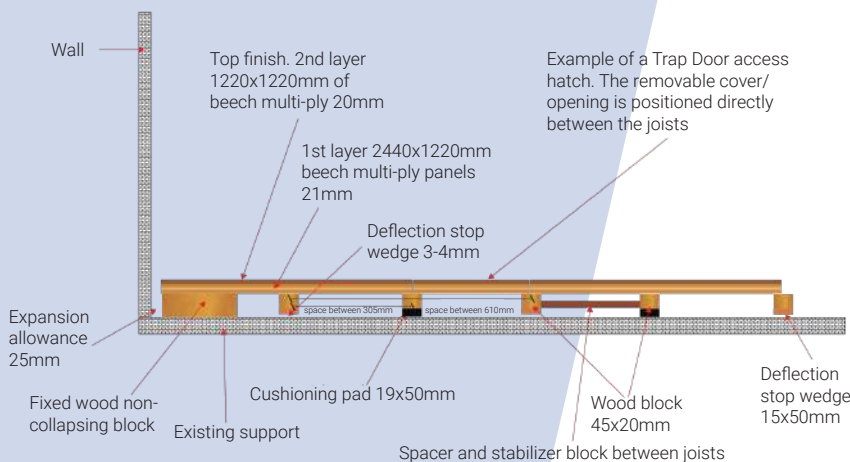
Onto this is laid a durable exterior grade birch plywood topped with the surface selected to fit the needs of the venue.

For customers requiring the most traditional craftsmanship, Harlequin also construct floors made from prime quality, specially selected and long lasting Oregon Pine.

## Stage refurbishment

When an existing stage floor finds itself in need of refurbishment, Harlequin offer a range of services including:

- sanding and repainting existing wooden floors
- replacement of a 'sacrificial' hardwood top layer
- rebuilding, repair or reconfiguration of stage





## Case Study

# Shaw Theatre

### Overview

“You are the best in the business and that’s why everyone recommended you to me.”

**Ellen Frost**  
Theatre Manager

Originally built in 1971 and known as the Library Theatre, the Shaw was fully refurbished in 1998 and renamed after George Bernard Shaw (1865 - 1950) who lived in the Kings Cross area in his later life.

Now owned and operated within the Pullman St Pancras Hotel, the 446-seat theatre underwent an extensive refurbishment following its closure in 2018 due to a fire.

The theatre hosts a wide variety of productions and performances and has a long-standing partnership with the Urdang Academy.

### Project highlights

<b>Name:</b>	Shaw Theatre
<b>Location:</b>	Pullman London St Pancras Hotel / Part of ACCOR Group
<b>Project Type:</b>	Theatre stage refurbishment
<b>Building Type:</b>	Commercial / Hotel
<b>Product Type:</b>	Harlequin Stage System/ dip traps/Vinyl surface Harlequin Standfast



# Case Study

# Shaw Theatre

## The requirement:

Fire damage meant the entire stage needed to be re-built.

## The solution

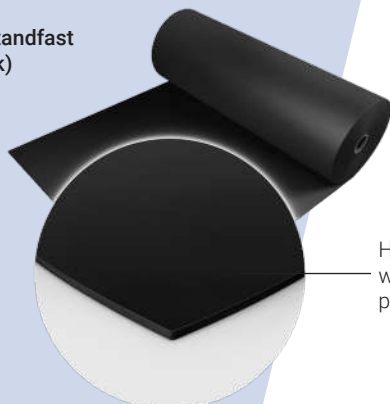
Harlequin Floors supplied and installed the bespoke Stage System by removing the top two surfaces down to the stripwood layer and cut into the under-structure to build two rows of dip traps before laying the hardwearing Standfast vinyl surface finish.

Whilst each stage is different and may require its own solution, Harlequin use established methods of construction and specially selected materials.

The stage construction may be assembled onto an existing concrete base, timber or steel beams, onto which joists are positioned with their centres matched to the requirements for loading and durability. Onto this is laid a durable exterior grade birch plywood topped with the surface selected to fit the needs of the venue.

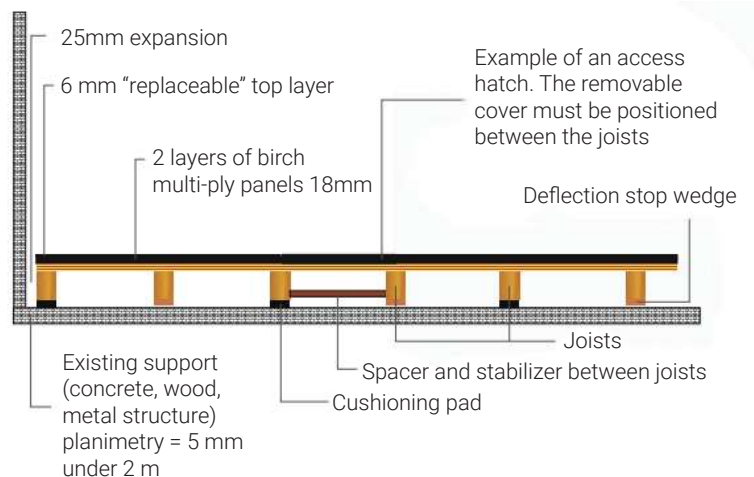
Harlequin work alongside architects and stage consultants to design, build and install stages including dip traps, orchestra pit fillers and provision for trap doors and ballet wagons as required.

Harlequin Standfast  
(Black)



Homogeneous PVC  
with a slip-resistant  
performance surface

## Cross section of the Harlequin Stage System sprung floor



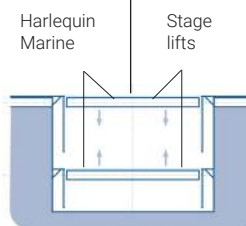
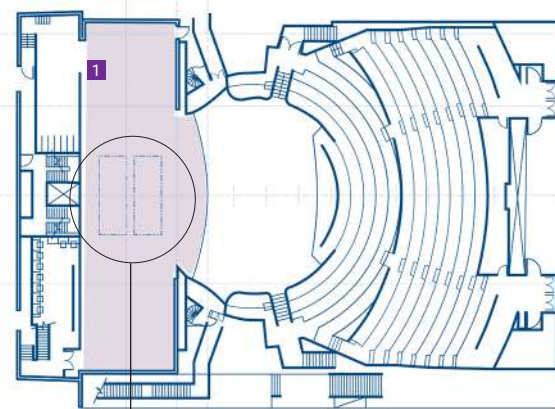
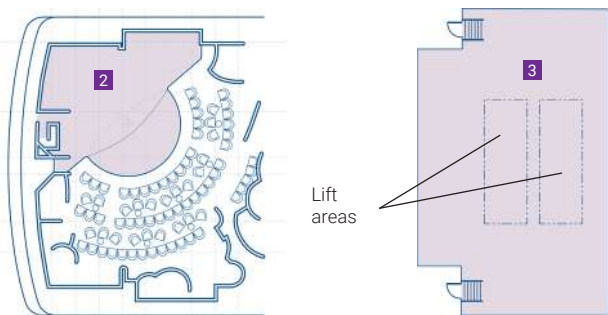


Harlequin Cascade vinyl flooring was installed to the plywood sub-floor of the main stage and cut to fit around Serapid tracks, traps and stage lifts.

A special screed was laid directly onto the metal deck immediately below the main stage and Harlequin Marine was installed onto the screeded area, including the surface of the stage lifts.

Harlequin Cascade was installed onto the plywood surface of the fixed stage area and revolve stage extension of the Explorer Lounge.

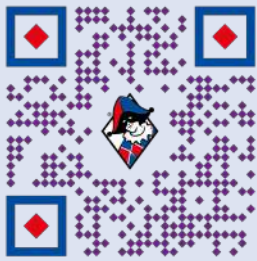
Initial fit-out/re-fits of Main Stage; Explorers Lounge & Deck 5 Scenery Store. Work usually carried out whilst in dry dock but sometimes whilst ship is in service.



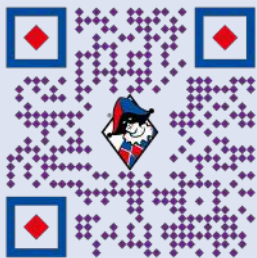
Cross section of below stage storage area with stage lifts

Harlequin **Cascade**™ and Harlequin **Marine**™ vinyl floor  
Floor dimensions

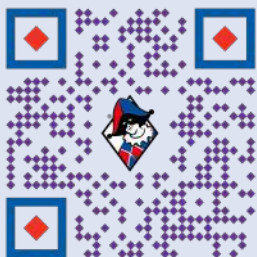
- 1 Main stage - 30.10m x 10.85m max at curved end - Total area: 256m<sup>2</sup>
- 2 Scenery Store - 13.5m x 8.5m - Total area: 109m<sup>2</sup>
- 3 Explorer Lounge - Total area: 168m<sup>2</sup>



Contact Us



About Us



Who we work with