

# Sightline

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**Soldaat van Oranje**  
**Bristol's Theatre Royal**  
**Český Krumlov**  
**Going Dark**  
**Lime Tree, Limerick**  
**Next Stage in Birmingham**





# Soldaat van Oranje

When I originally saw this production I was taken by a Dutch friend, who was a one-time Technical Director of the Netherlands Opera. He told me that we were going to see something completely different, but that was all. I have to say that I was completely bowled over. There was so much happening and almost too much to take in at one viewing.

Some weeks later I returned and was given a backstage tour and watched the pre-show set-up and testing of all equipment prior to seeing the show for a second time. Now, knowing a little more of just what every performance entails, I have to say that I was even more impressed by what had been rather uniquely achieved.

A hangar on the disused Valkenburg airfield in Katwijk near Leiden in the Netherlands is the setting for this very innovative musical, *Soldaat van Oranje*. Even though it is, to a degree, in the middle of nowhere it has been drawing audiences to this unique 1103-seat auditorium since October 2010 and the run has recently been extended yet again until February 2013. The general principle is that, instead of having the sets change, the auditorium itself revolves to face a number of stages using a system called SceneAround.

The musical is based on a book by a Leiden university student, Erik Hazelhoff Roelfzema, who escaped to London, where the Queen and Government of the Netherlands were in exile during the German occupation, to take part in the resistance. Fred Boot, one of the two producers, had the idea, obtained the rights and brought in the other producer, Robin de Levita, who developed the concept and brought the production to fruition.

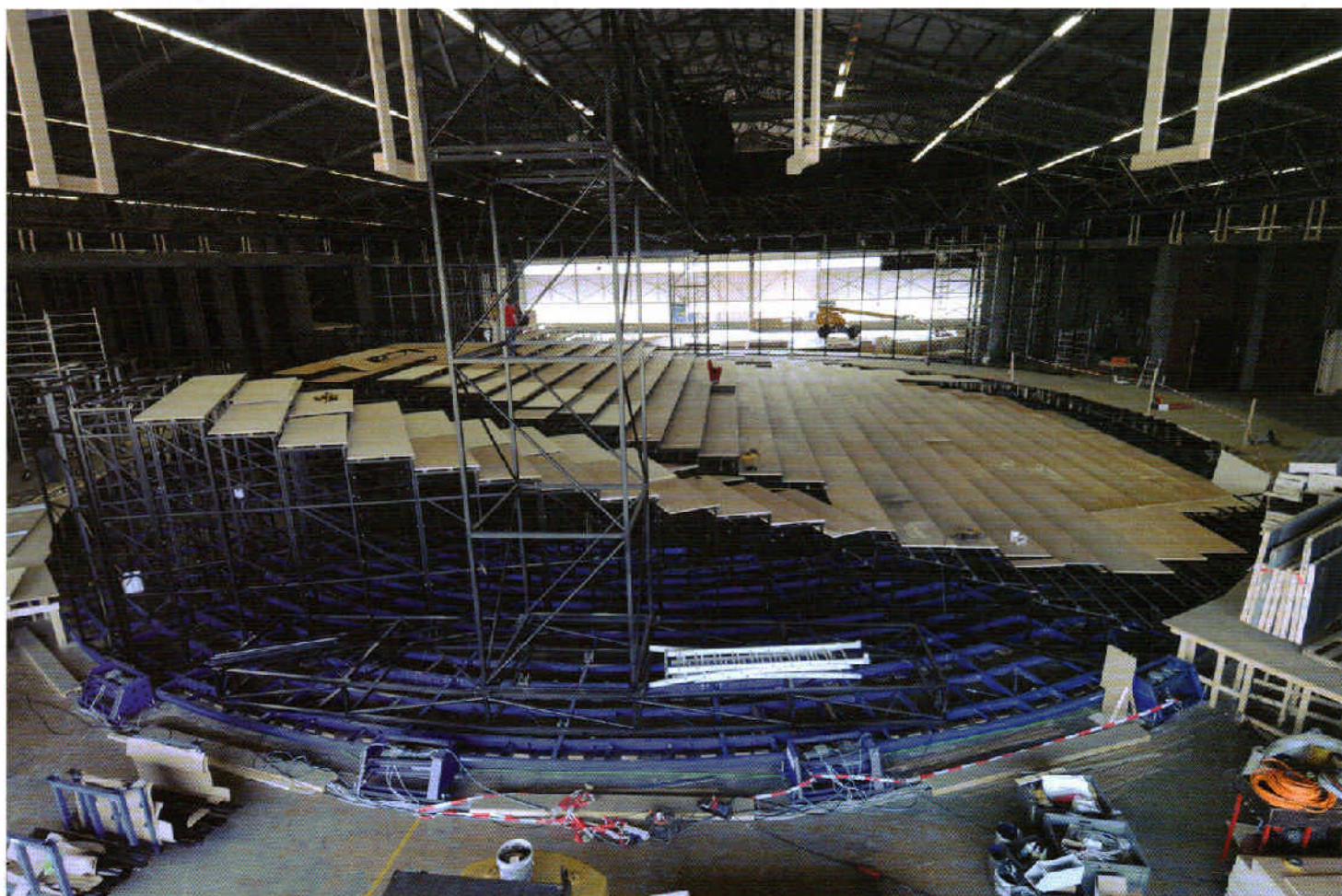
The auditorium itself was designed by Robert Nieuwenhuis and is 34 metres in diameter. The structure weighs approximately 100 tons and the audience load is estimated as a further 100 tons. The revolve is driven by 20 motors controlled by five high-intelligence inverters (controller and inverter) and these are controlled by an industrial PC. The PC also controls the projection panels and the complete system is operated by a special PC with a backup system. The speed of the revolve is fully adjustable and programmed to suit the particular sequence with a maximum speed of 1.2 metres per second. The system is specially designed to have the full torque of the motors at every speed.

There are four projection panels which give

James Sargent visits an unusual performance space

*The seating tiers being installed*

*Photo: Joris van Bennekom*





*Thirty-four metres in diameter, the revolve weighs approximately 100 tons and is driven by 20 motors*  
*Photo: Joris van Bennekorn*



*The completed 1103-seat auditorium showing the 40 metres span of trussing*  
*Photo: Joris van Bennekorn*

a 180 degree projection screen but are also mounted on tracks to enable them to reveal the setting behind. They can also be used as dividing screens, enabling scenes to be played in two locations with one of the screens forming the division. This was most effectively used for a scene that was taking place at the same time in both London and Holland.

Above the auditorium is a two metre by two metre truss with a span of 40 metres. The approximate weight of the truss is 15 tons and it is supported on four pillars positioned in between the settings. These also bear the weight of the projection screens and their 40 metre circular truss. There are four additional, but not weight-bearing, pillars. The structure of the roof is not load-bearing, having been originally designed purely for protection from the weather. This truss is absolutely key to all the lighting, sound and projection in front of the sets.

In view of the hangar's roof structure and to ensure that this extremely wide truss was absolutely stable, particularly in view of the projection, two very ingenious counterweight systems were brought back from two points on the truss to the load-bearing pillars. Besides



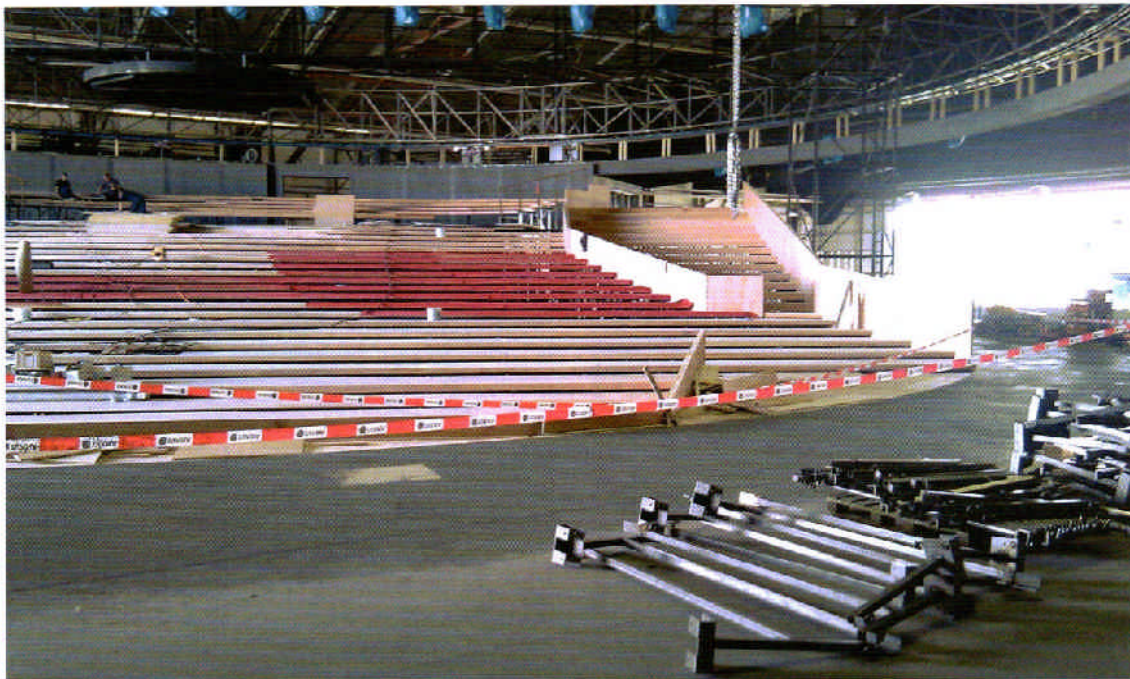


the FOH lighting and speakers the truss holds the six Panasonic PT-DZ12000 E projectors. As well as static images of, for example, Dutch and London street façades, archive film of the German occupation and the Allied liberation are projected.

The nine settings include the Minerva students' society, Rapenberg students' home (two levels), firing range, the Kursaal restaurant in Schevingen, the beach at Schevingen, the German charge room, UK message room (two levels), Queen Wilhelmina's London office

and anteroom and a Dakota on the runway of a military airport. The beach and the airport scenes are worth particular mention.

The cyclorama at the back of the beach benefits from quite excellent projection by four Barco's FLM20 C/W. The sea itself is set in a swimming pool structure with water of 60 centimetres at its deepest and leading onto a sandy shore. There is a wave machine, the machinery for which is housed in a Portakabin sited outside of the hangar. To be able to bring this on site as a completed installation

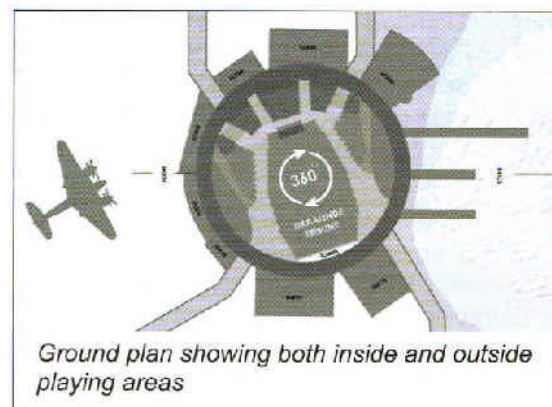


*The seating nears completion*



*'a swimming pool structure with water of 60 centimetres at its deepest'  
Photo: Joris van Bennekom*





Ground plan showing both inside and outside playing areas

ready to be connected was certainly a great asset during the three months it took to build the entire auditorium and staging. The four water jets used in a storm sequence are also controlled by the pumps of the pool, circulating water from the pool itself. The depth of the water allows for the great effect of people really having to struggle when their rowing boat capsizes. At the bottom of the pool are three landing stages in different positions. These are driven by compressed air and controlled manually by the crew.

The airport scene is the one moment in the production when, in order to reveal the hangar doors, the two trucks which make up the students' home have to be pulled back and to the side. The weight of the trucks require mini tractors on each truck to achieve this in the relatively short time available. Glass panels have been put into the hangar doors to allow audience visibility, if the weather is bad enough to prevent the doors to the outside of the hangar being opened. The sequence involves the Dakota aircraft taxiing into view, the Queen disembarking and being driven away up the disused runway in a vintage Daimler. The final moment of the production also shows the hero Erik riding his motorcycle along the runway and away into the distance.

Two motorcycles are also used to great effect on two previous occasions when they appear on the forestage in front of the projection screens with the auditorium revolving in the opposite direction.

*Top: 'They really have to struggle when the rowing boat capsizes'*  
 Photo: Joris van Bennekom

*Centre: A Dakota aircraft taxis into view*  
 Photo: Joris van Bennekom

*Lower: There are three landing stages in different positions*  
 Photo: Joris van Bennekom







Due to the nature of the design, sound becomes a major problem in so far as the speakers need to respond to each move of the auditorium. The musicians have to be in a soundproofed bandbox so that their sound is not affected by the changing position of the auditorium. There are 14 identical speaker clusters evenly spaced. The auditorium has 30 stops and the speakers need to be able to deliver a complete theatrical LCR mix with extensive reverb and surround effects in every position. Managing and routing of all audio signals is a Meyer Sound D-Mitri audio platform with SpaceMap multichannel surround panning. With several processors distributed round the stage near the input and output amplifiers, the D-mini system manages

all audio and control data as the auditorium revolves.

As it is not possible to hang lighting rigs above each setting, the settings include many practicals and 155 x LDDE SpectraconnT5 units built into the ceilings of the settings. Each of these units has 4 T5/35w fluorescent tubes in red, green, blue and white and give effective if not directional lighting.

The only temporary structural build is the front of house facilities, which have been added to one end of the hangar. These are quite elaborate with excellent facilities, including box office, adequate toilets each with a furnished anteroom, two restaurants, a bar, coffee bar, shop and exhibition area displaying background information to the story. The

*'The sea ... leading onto a sandy shore'*

*Photo: Joris van Bennekom*

*'A hangar on the disused Valkenburg airfield'*







*The temporary front of house facilities under construction*  
 Photo: Joris van Bennekom

original support offices to the hanger house dressing rooms, wardrobe and green room.

Both sound and lighting control are at the back of the auditorium, but the DSM and video/projector control are on a platform at the back of one of the settings.

All in all an incredibly complex set-up, which seems to run almost seamlessly and to great dramatic effect. The producer, Robin de Levita, is already considering a production to take advantage of the set-up in the future, but may be hard pushed to top *Soldaat van Oranje*.

*'sound and lighting control are at the back of the auditorium'*



#### **Video:**

Auditorium	6 Panasonic PT-DZ12000 E
Sea	4 Barcos FLM20 C/W
Control	12 Watch Out PCs.

#### **Light:**

155 LDDE Spectraconnct5
3 Floodlight HQI 1000W
12 Fresnel 4 kW
16 Vari*Light VL3500 Q spots.
8 Striplights
4 Vari*Light VL3000
2 PAR spot raylight shortnose
2 HMI PAR LTM 12 kW
10 Floodlight HQI 400W
18 Profielspots ADB DS205 2kW
1 Roadhog
2 DP8000.
1 PC running HOG-PC

#### **Sound:**

Meyer Sound D-Mitri system, combined with 14X6 Alcons LR14 line array. Completed with several Artist subwoofers.