

Project:	Shaftesbury Theatre FOH Refurbishment	2 Tollbridge Studios Tollbridge Road Bath, BA1 7DE
Subject:	External Lighting Assessment	
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## 1 Introduction

This Design Note provides an assessment of the external lighting for the proposed refurbishment of Shaftesbury Theatre.

The purpose of the note is to outline the principles for minimising the impact of the proposed lighting scheme by clarifying the existing condition and the relevant codes, guidance and standards which should be considered for the design of the external lighting scheme.

## 2 Existing Conditions

### 2.1 General

The baseline condition is considered to be the existing lighting and show signage elements mounted on the building.

### 2.2 Architectural Lighting

The external lighting comprises a number of metal halide spot and flood lights, ranging from 35W to 250W, with different colour temperatures to illuminate the show signage and the terracotta façade. At pavement level the façade is washed to create a uniformly lit warm effect. Above the canopy, the main columns are picked out with a narrow beam spotlight and the walls are lit with flood lights with a cooler colour temperature. The flood lights are generally mounted on the outer edge of the canopy, with a couple fixed directly to the terracotta, and are very prominent.

The bell tower is illuminated by small flood lights mounted on the front façade at high level and also from the rear. The effect is to create patches of light and shadow on the main viewing point from Shaftesbury Avenue. Maintenance access to the luminaires on the façade is difficult. The upper part of the facade, above the cornice, is unlit.

The new fly tower extension is illuminated using linear LED fixtures to accentuate the distinctive saw-tooth weathering steel facades and the colour is very warm in comparison to the main building lighting.

### 2.3 Theatre and Show Signage

The existing theatre name signs are non-illuminated and are mounted horizontally on the corner of the building and vertically on the facades; one on each of the Bloomsbury Street and High Holborn elevations.

The show signage comprises non-illuminated poster boxes at pavement level and three large non-illuminated banners above the canopy at the corner of the building.

## 3 Lighting Proposals

### 3.1 Architectural Lighting

The existing lighting fixtures will be replaced with a new scheme using LED fixtures to illuminate specific architectural details of the ornate façade.

The proposed lighting fixtures will be a combination of linear modules and spot lights with RGBW light engines to provide the ability to change the colour of the facades to suit a particular show. The colour temperature of the white component will be warm white and will be selected to enhance the natural colour of the façades.

The use of LED fixtures will bring a number of benefits to the theatre including reduced energy consumption, an increase in the maintenance cycles, better light level control and enhanced visual appearance because the LED fixtures are smaller, are more able to be concealed, can be fixed to parts of the façade to enable a more tightly defined illumination and have the ability to maintain a more consistent colour temperature across the facade.

### 3.2 Theatre and Show Signage

The theatre name will be provided by LED lettering mounted either on the canopy or vertically on the main columns.

The show signage will comprise 'poster box' type digital LED display screens at pavement level with larger digital display screens above the canopy, one on each of the Bloomsbury Street and High Holborn elevations. The proposed display screens are smaller and fewer in number than the current show signage, allowing previously concealed architectural features on the listed façade to be uncovered.

The purpose of the digital display screens is to allow for changing of the show signage remotely. This avoids having to erect scaffolding on the façade with the associated cost implications and wear and tear to the listed building.

## 4 Assessment

### 4.1 General

The refurbishment of the external lighting scheme will introduce additional sources of light to the building which will have the ability to impact on the local environment.

In order to limit the impact the detailed design of the lighting will be assessed against the following relevant codes, guidelines and standards:

- Clean Neighbourhoods and Environment Act 2005;
- The Institute of Lighting Professionals (ILP): Guidance Notes for the Reduction of Obtrusive Light GN01:2011.
- The Institute of Lighting Professionals (ILP): TR5 Brightness of illuminated advertisements.

### 4.2 Operation

The operation of the external lighting will be predominantly in the evenings, however, some lighting may be required during the day, for example, for matinee performances, or if the general daylight conditions are poor.

Display screen hours of operation are proposed to be 8am - 11pm, with images changing every 20-30 seconds. An image with reduced luminosity and changing frequency could be displayed throughout the

night.

In order to limit the impact of the signs on drivers, astronomical dimming will be considered to control the brightness of the signs in response to the position of the sun through the day and the year. This will also ensure that the signage is being used economically as the power used to drive the brightness of the displays will be in relation to the ambient conditions.

Specialist advise will be sought during design development to ensure the minimum impact from the self-luminated signage upon the local context.

5 Appendix A – Existing Daytime Images





6 Existing Night Time Images

