

Clifton Suspension Bridge Lighting Public Consultation May – June 2022

Introduction

The Clifton Suspension Bridge is an iconic Grade 1 listed structure which is operated and maintained by the Clifton Suspension Bridge Trust. The Trust relies solely on the bridge tolls to fund maintenance and improvement works.

Bridge lighting has been an integral part of the structure throughout its history and, now the existing lighting is reaching the end of its useful life, the Trust is seeking to replace it with a visually impactful, environmentally friendly lighting design.

This should ensure that the Bridge remains a focal point for the area and continues to contribute to its cultural heritage.

Environment & Ecology

The proposed new lighting would bring environmental benefits in terms of more sustainable lighting and an improvement to the local ecology.

To minimise the environmental impact, Clifton Suspension Bridge Trust is exploring possible sources of renewable energy, including photovoltaic cells potentially on the Trust's building.

Clifton Suspension Bridge Trust has been undertaking ecological surveys throughout 2021 and will continue to do so this year to ensure that there is no negative impact on local wildlife.

Aspirations

The Trust's vision is to:

- Install a cutting-edge, visually impactful, low energy, environmentally sustainable lighting design for the Clifton Suspension Bridge;
- Creatively light the Bridge, giving the opportunity to use different colours that can be used to reflect communities' values and celebrations;
- Accentuate the Bridge's iconic features;
- Increase the level of illumination on the ground in order to enhance the safety of pedestrians, cyclists and bridge attendants;
- Ensure the new lighting is of a discreet nature with minimal intrusive visual impact and which avoids any permanent damage to the structure.

Why now?

There are several reasons why we are progressing this application now:

1. The Bridge is scheduled to undergo significant maintenance works involving the removal of the existing lighting system to allow for the repainting of the chains, hangers and parapets in 2023. An opportunity therefore exists, to carry out the relighting at the same time in order to keep costs and disruption to a minimum.
2. The existing lighting is nearing the end of its useful life and with huge advancements in technology a genuine opportunity exists to significantly upgrade the entire lighting system that will be more energy efficient and will allow the Bridge to play a larger role in the community.
3. LED has come of age. This means that products have got smaller, light output more efficient and systems more controllable. Although the scheme from the past should be applauded for its foresight in using LED, it is now time to relight the bridge using the latest cutting-edge technology.

Existing Lighting

- The existing lighting scheme was 'of its time' and now needs replacing. The products installed would typically have a 10-to-15-year life span and therefore, just like many products of this age, are going to cost more to maintain in the future.
- Certain elements and views of the bridge are not currently well defined by the existing lighting at night.
- It is therefore now time to reinvigorate the bridge with new lighting which will allow some of these 'lost' impressions to be re-established for the benefit of all.



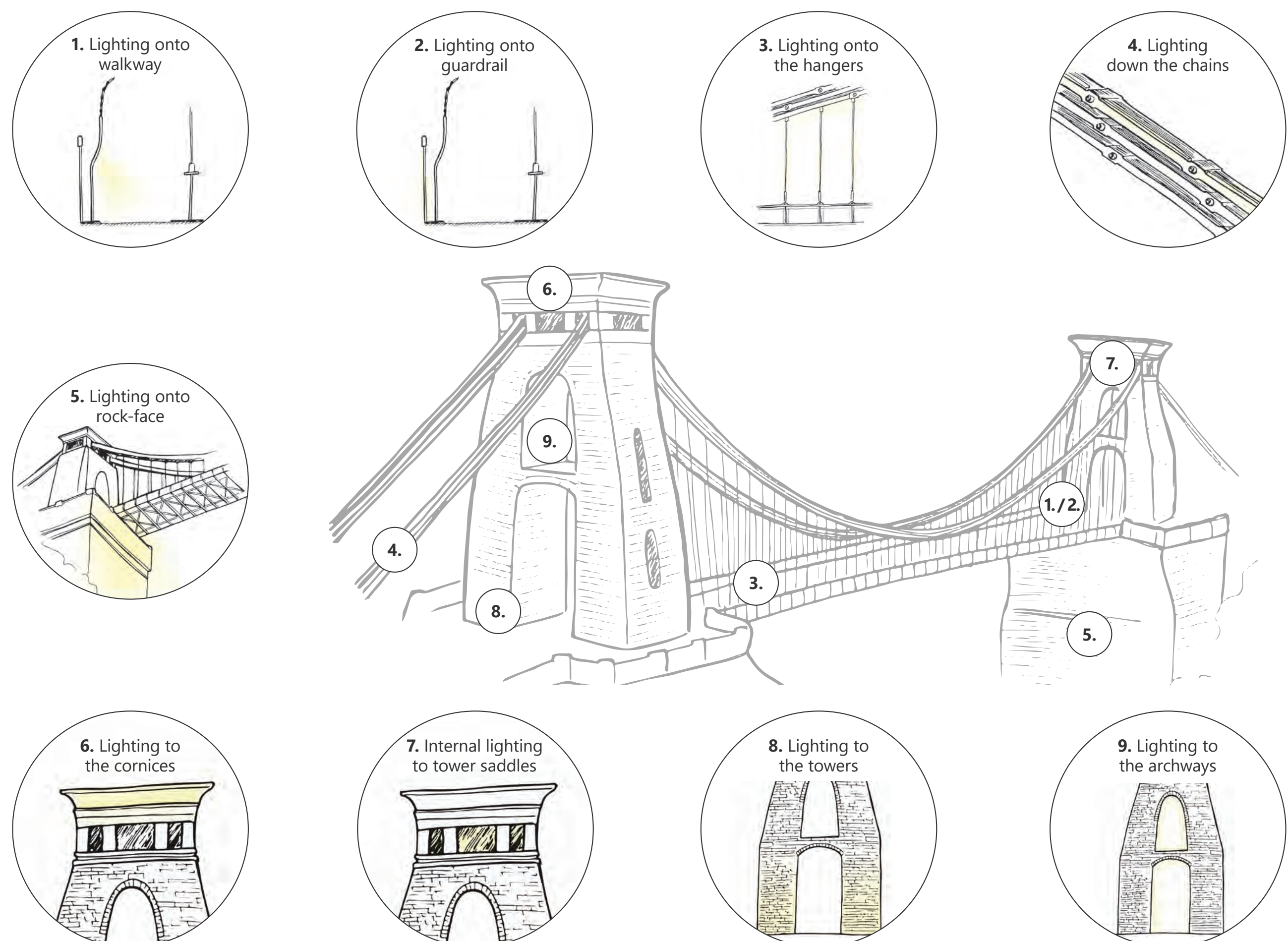
Lighting Brief and Overview

The lighting to the Clifton Suspension Bridge not only needs to be functional and beautiful, but consideration also needs to be taken into each of the design fundamentals to create a holistic scheme. The proposed lighting approach has been broken down into the individual lighting treatments, where each option has been considered with the four key fundamentals:

- ensures that negative environmental impacts are kept to a minimum;
- is architecturally defining;
- considers the wider maintenance of the lighting;
- promotes flexibility to transform the lighting in response to special events through the use of luminaires with white and coloured light.

Key Features

1. Lighting to pedestrian walkway.
2. Discrete lighting to the lattice metalwork, highlighting the attractive pattern by night. This element can be appreciated on the walkway and from afar.
3. Illumination from the base of the hangers, providing considered light up the structure and to the underneath of the chains.
4. Mounted to the top of the chains, the lighting accentuates the shape of the bridge.
5. Considered lighting to the Leigh Woods and Clifton abutments forming the visual backdrop to the Bridge and Avon Gorge.
6. Integrated lighting uplighting the tower cornices, highlighting the crowns of the towers.
7. An internal glow to the tower saddles.
8. Lighting up the base of the towers highlights the size and texture of the structure, while giving the bridge presence from a distance.
9. Focused lighting within the central arches to each of the towers.

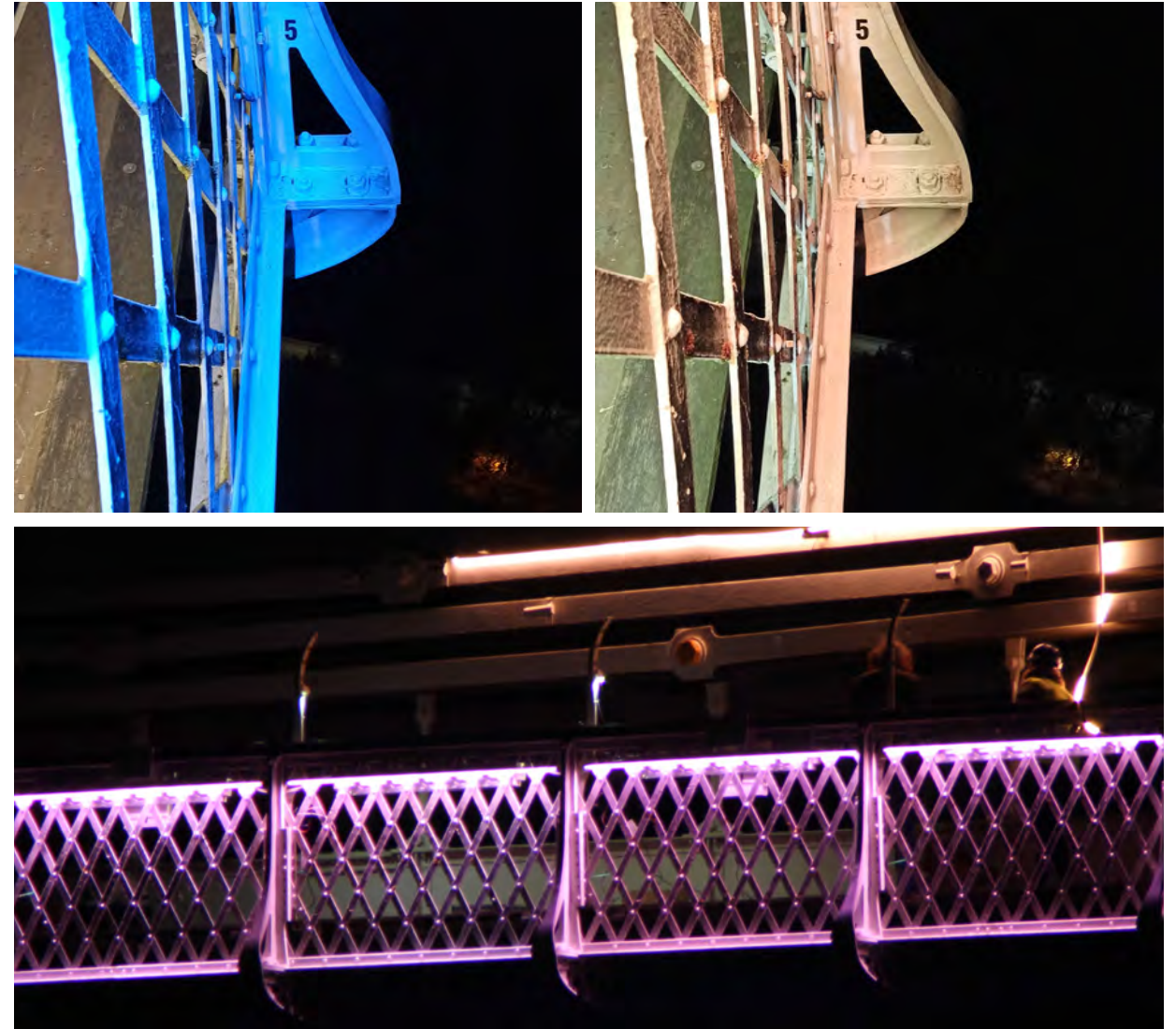


Detailed proposals / solutions

Proposed treatment 1 Lighting onto the guardrail

Luminaire with considered optics to be clamped through existing guardrail to illuminate and reveal lattice structure.

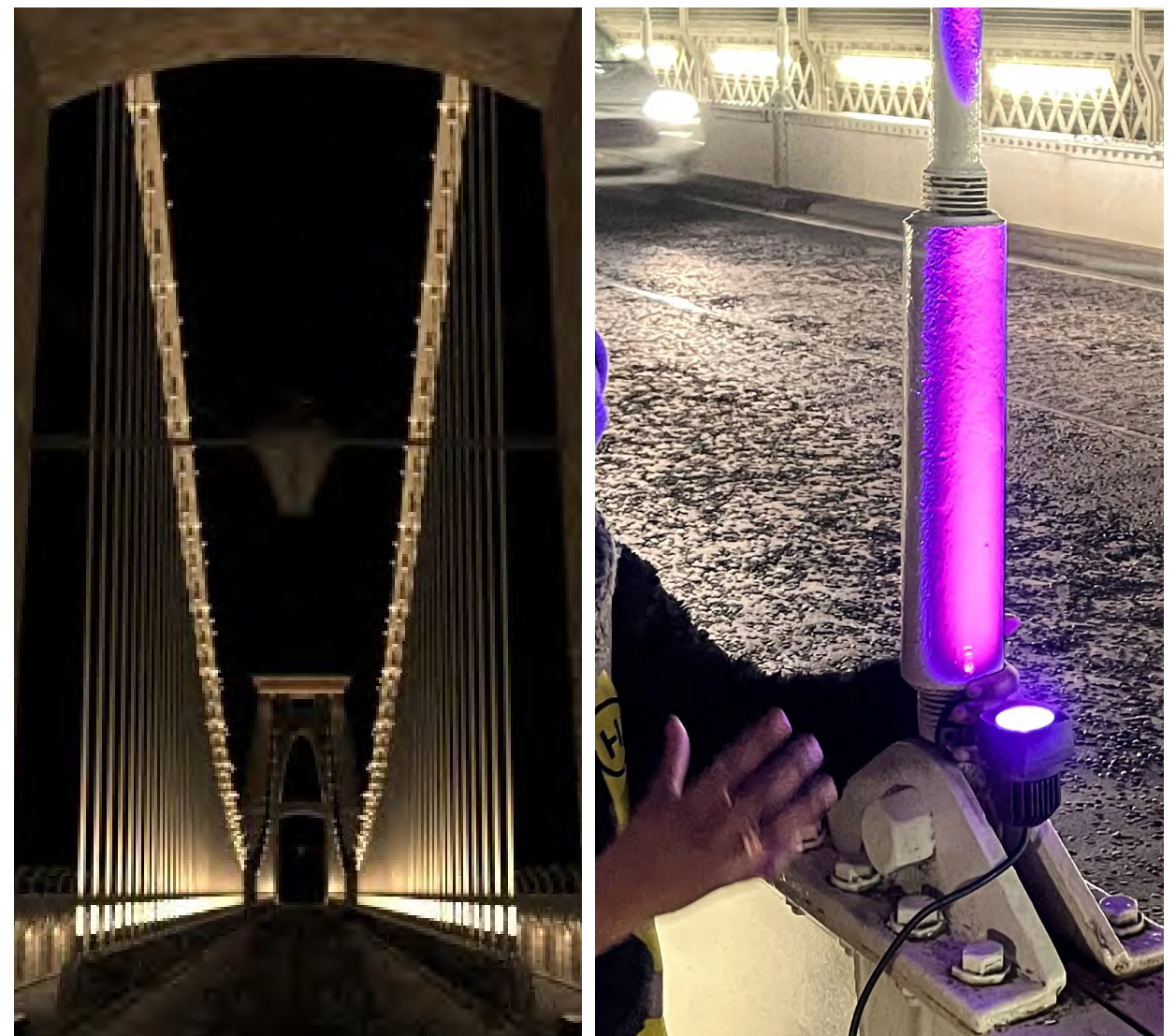
Luminaires to be located just below the gantry rail to mitigate interference and to be unobtrusive during daylight hours.



Proposed treatment 2 Lighting onto the hangers

Luminaire with optical control to illuminate the hangers and light the underside of the chains.

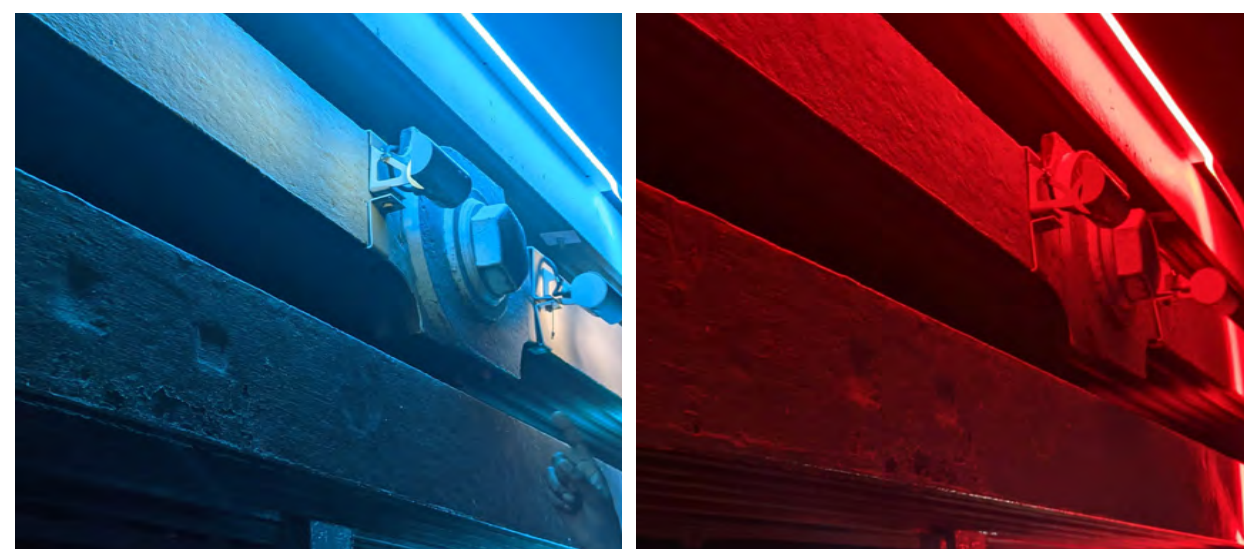
Lighting treatment to be mounted to the base of the hangers within an adapted housing, which is to be clamped to the base of the hanger.



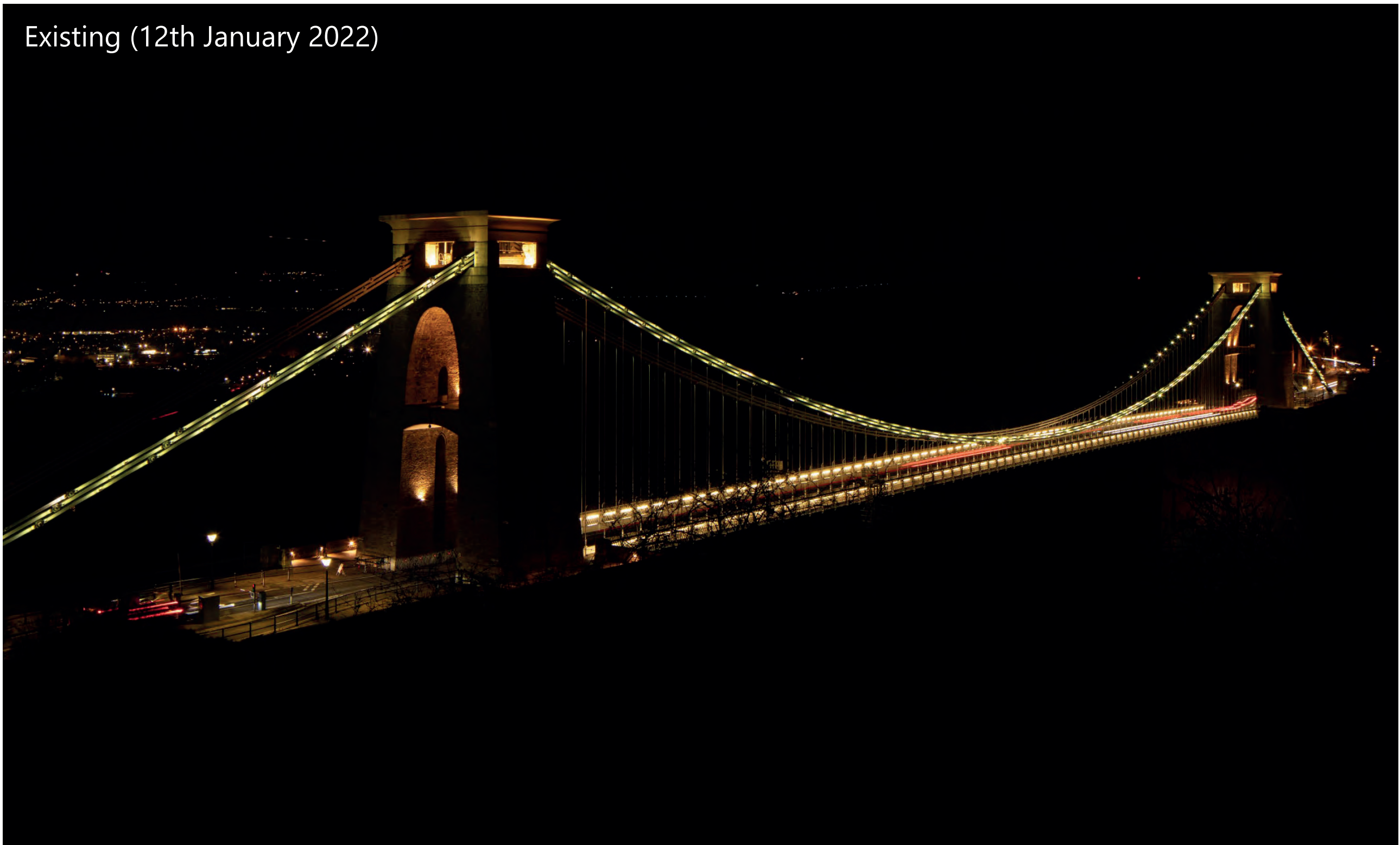
Proposed treatment 3 Lighting down the chains

Luminaire to be neatly mounted within extruded channel, clamped to chains to directly express the bold curvature of the chains.

Lighting treatment to be mounted to the top chain only to provide a lighting graze downwards.



Existing and Proposed night time views of the Bridge



Have your say

We welcome your feedback on these proposals which will help to inform the final scheme. Please provide your feedback before the consultation closes on 17 June.

You can either complete a survey at the exhibition or submit your comments online at www.surveymonkey.co.uk/r/suspensionbridgelighting.

What happens next

Feedback and comments received during the public consultation will be carefully considered by the design and planning team as they finalise the scheme before submitting applications for planning permission and listed building consent to both Bristol City Council and North Somerset Council.

Once the applications have been registered, both councils will carry out further statutory consultation. This will provide a further opportunity to comment on the proposals.

Timeline

- This consultation closes on 17 June.
- The Trust is targeting submission of the applications in July 2022.
- Subject to planning permission and listed building consent the Trust expects to start work on site in early 2023.
- Anticipated completion in 2024.



History

Throughout its history, the Bridge has been illuminated in a variety of ingenious and spectacular ways.



8 December 1864: Opening Celebrations

For the first time in Bristol and possibly the UK, a public structure was lit up with electric lights. The experiment was not a success!

1865 – 1927: Gas Lamps

Each night gas lamps were used to light the bridge. They were probably removed when electric lights were installed at the toll houses in 1927.

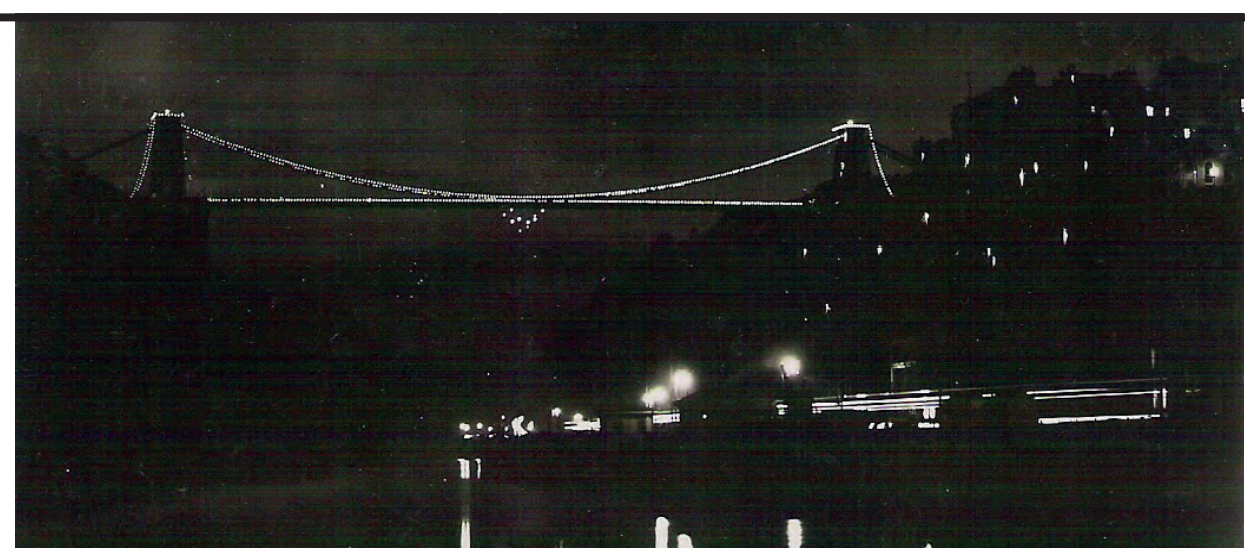


1900 – 1911: Celebration Events

On special occasions the whole bridge was lit with fireworks and 'fairy lights' (small candles in coloured glass shades). Attaching these to the chains and lighting them by hand was a difficult and dangerous job.

1930: Bristol French Week

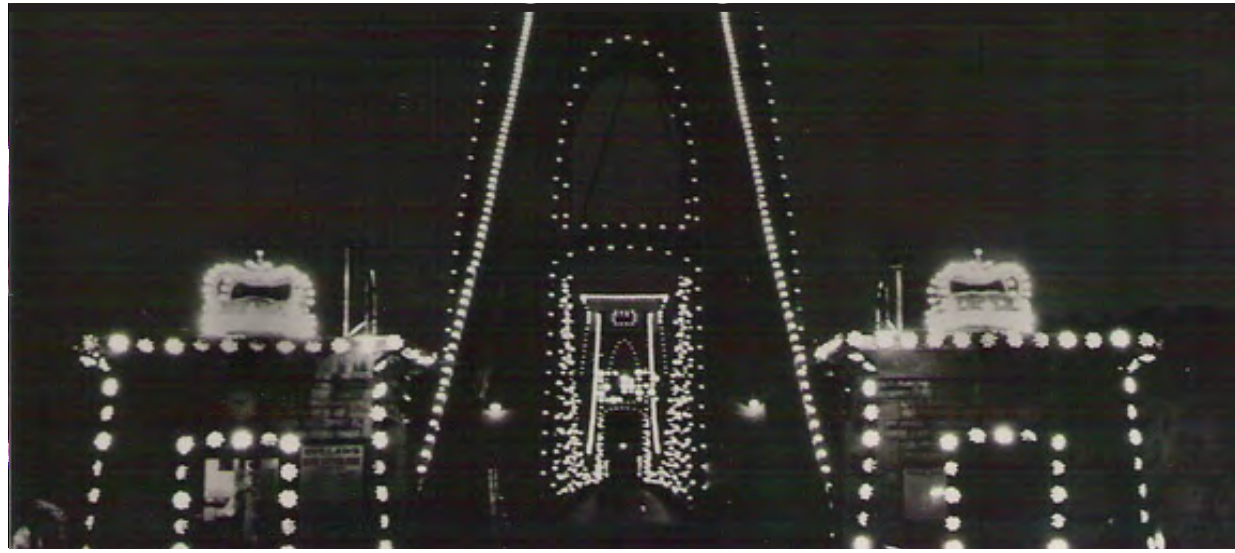
Small red, white and blue electric lights were fitted along the chains for the first time. This created a new problem as people stole the lightbulbs to keep as souvenirs!



143 ELECTRIC BULBS
MISSED FROM
SUSPENSION BRIDGE
Two Welshmen Fined for

Western Daily Press, 4 June 1935





1950s: Celebration Events

In 1951 the Bridge was illuminated for the Festival of Britain with 4500 bulbs. The number of lightbulbs increased again in 1953 for the Coronation of Queen Elizabeth II. A huge undertaking, this system used six miles of cabling, 6000 lamps and included crown decorations on top of each toll house.

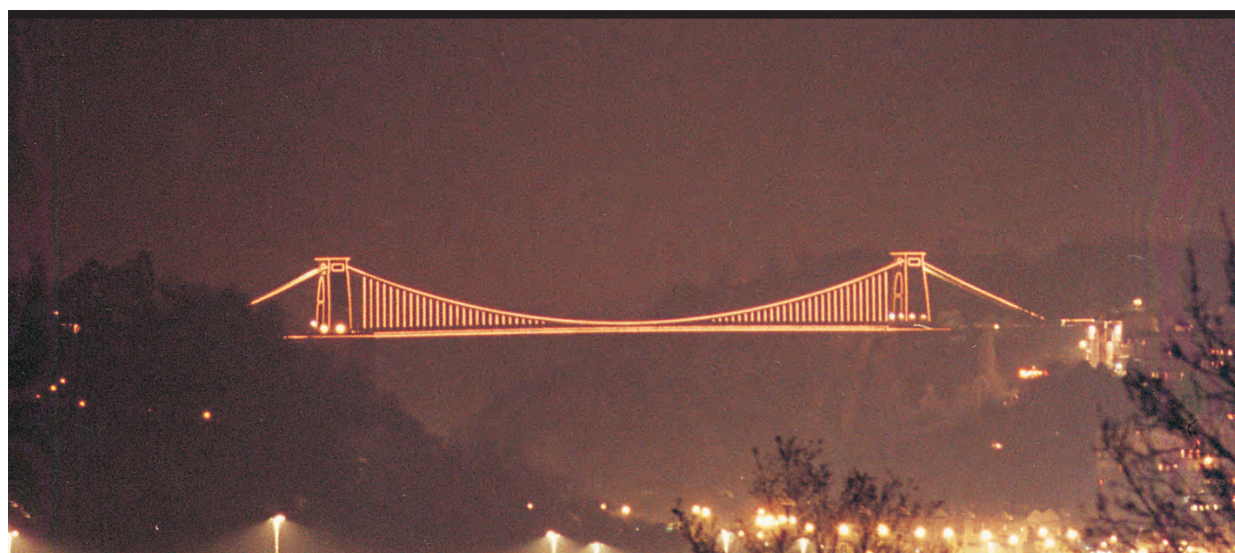
1967 – 1980: Electric Festoon Lighting

From 1967 the Bridge was lit throughout the summer months, Christmas and Easter to promote tourism. 4,200 25w tungsten filament lamps were installed in 1980, allowing the bridge to be lit up every evening from dusk to 1am – although like previous systems there were problems with theft of the lightbulbs!



1992: Guide Lite

Guide Lite was developed as a form of emergency lighting for use in smoke-filled buildings. Tiny lights contained in rectangular plastic tubes traced the outline of the bridge towers, chains, rods, abutments and toll houses.



2006: LED Technology

An award winning project saw the latest cutting-edge LED dimmable technology, reducing energy consumption by 53% and minimising glare and light pollution.



Scan the QR code below to see a film about the installation of bridge lighting in 1953 and explore the history of the bridge illuminations in more detail.

