

Support Statement (Lighting and Ecology)

RPS, May 2020



Our ref: JR6308

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Date: 7 May 2020

Jen Ponting
King's Cross Central Limited Partnership
4 Stable Street
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Dear Jen,

Bridge 2, King's Cross – Support Statement (Lighting and Ecology)

It is understood a new pedestrian bridge (known as Bridge 2) is proposed over the Regent's Canal, adjacent to the existing Fish & Coal building.

Argent have appointed RPS to review the proposed lighting design for Bridge 2 in relation to any possible ecological issues. RPS has been employed as the acting ecologists on the King's Cross Urban Regeneration Project since 1999, thus in a position to provide a knowledgeable and informed response.

Baseline

As part of the planning application for the wider King's Cross urban regeneration, the following ecological baseline is known for Regent's Canal:

- common pipistrelle bats are known to forage and commute along the canal;
- house sparrows are known to nest in the walls along the footpath; and
- a range of common water birds are known to nest and forage on the canal.

These species have been considered during the planning application process over the years at King's Cross in terms of building design, sensitive lighting, landscape proposals and planting lists. Mitigation and enhancement measures have been implemented through the construction and operational phases as each plot has come forward at King's Cross.

The King's Cross redevelopment scheme lies in a highly urbanised, and thus in a well-lit setting. The current light levels along the tow path under the proposed location of Bridge 2 range from 2-10 Lux (Studio 29, 2020).

Lighting Proposals and Review of Potential Impacts

1.1 Proposed Lighting Scheme

The lighting design for Bridge 2 has been designed by Studio 29. The lighting at Bridge 2 will aim to create a visually exciting and safe route for the public to cross with ease between Granary Square and King's Cross.

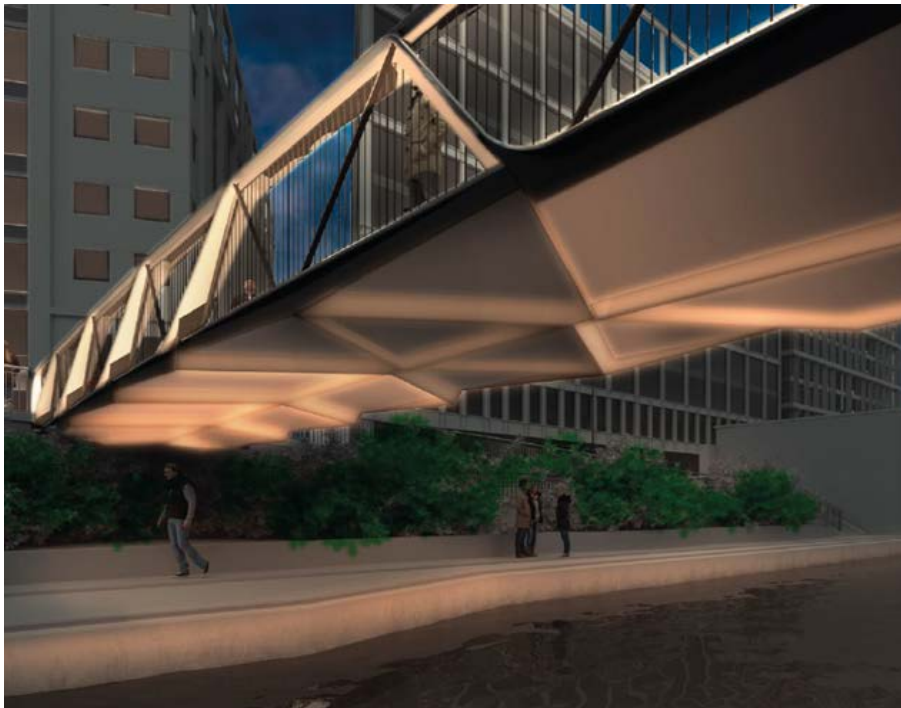
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The lighting scheme celebrates the form and structure of the bridge by discreetly integrating lighting and ensuring a sensitive design which has minimal impact on the surrounding canal and wildlife.

The lighting design at Bridge 2 consists of three main elements:

- 1) lighting to the deck - this provides a safe light level in a visually interesting way;
- 2) lighting to the structure to highlight the bridge shape and form; and
- 3) lighting to the underside of the bridge to light the soffit edge and tow path.

The new LED lighting will be white and colour change which allows for multiple scenes to be created. A white light will be for everyday use with a coloured lighting for special events.



1.2 Potential Impacts

The following ecological impacts have been considered as part of the bridge design and its proposed operational lighting features:

- additional light spillage onto Regents Canal;
- disruption of known commuting and foraging routes for nocturnal species known to use the local area, such as bats; and
- increase in light pollution may expose individuals to higher predation levels such as water birds known to use the canal and house sparrow known to use the walls along the footpath.

1.3 Lighting Design and ecology

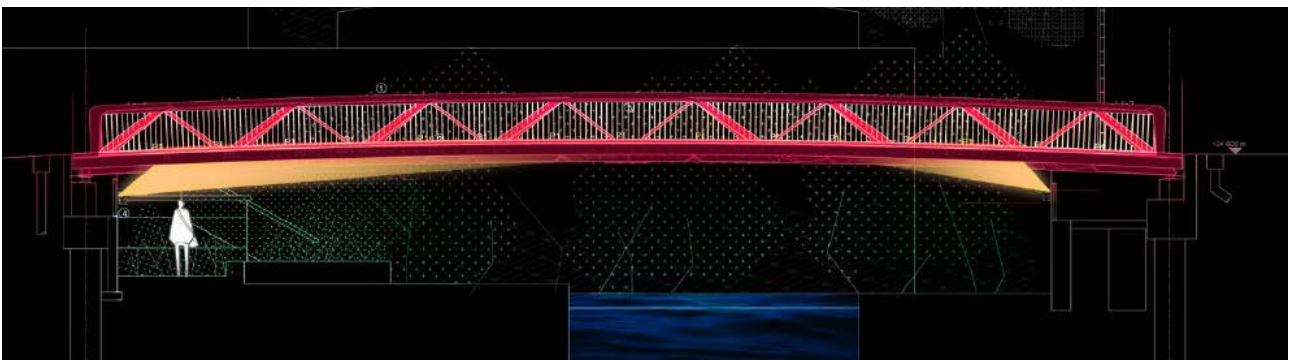
The design has sensitively been produced by Studio 29 and considers Regents Canal and the local environment. Studio 29 have implemented the following measures in order to reduce any negative impacts, particularly in terms of ecology (March 2020):

- **Direction of Luminaires** - fittings will be carefully angled to ensure they light what they are designed to illuminate, therefore no fittings will be lighting into the water;
- **Luminaire Selection**- careful selection of fitting types to ensure suitable beam distributions and light output will help minimise unwanted spill light;
- **Lensed Fittings** - to control the direction and beam distribution of light;
- **Use of Cowls** - to shield the light and cut off light spill in directions not wanted;
- **Lighting Control** - the lighting will be on a control system, therefore each set of lights can be dimmed and programmed;
- **Dark Skies Initiative** - lighting will not be pointed directly up at the nights sky and only be angled towards the structure; and
- **Minimise Light Pollution** - light will only be used where needed to light a surface. Spill light will be avoided as much as possible.

Linear lensed fittings will be mounted under Bridge 2 to illuminate the bridge soffit and reflect white or coloured light onto the towpath to create an interesting walkway where people feel safe. The same luminaires are used as the recessed lights under the adjacent bridge. The fittings will be mounted on the abutment chamber wall using adjustable brackets so the fittings can be focused where to project light were required. They will uplight the underside of the bridge structure fading off to the middle minimising light spill onto the canal. Cowls will be used to reduce upwards light and glare to the surrounding environment.

The current light levels along the tow path under the proposed location of Bridge 2 ranges from 2-10 Lux. The new lighting to the underside of Bridge 2 will be carefully controlled to match the current light levels under Bridge 1 (range from 5-25 Lux also present along the canal) meaning a slight increase in the existing Lux level.

To minimise light spillage over the canal, linear lighting is to be mounted on the abutment bearing chambers under the bridge to light the North and South soffits. This will provide illumination to the tow path ensuring people have a suitable light level to walk with ease and feel safe at night.



Conclusion

The Lux level will be increased slightly at Bridge 2, but the innovative design will stop light from spilling onto the canal while maintaining an even coverage of light into the correct locations, angled and dimmed to prevent direct light onto the water. We can therefore conclude that all light spill will be contained through the design with no direct impacts on the canal and associated local wildlife.

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Yours sincerely,
for RPS Consulting Services Ltd

A handwritten signature in black ink that reads "K Shakespeare". The letter "K" is large and stylized, followed by the name "Shakespeare" in a cursive script.

Kerry Shakespeare

Technical Director

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