

Guidelines 'Light and Environment'

Important guidelines for the preservation of nature in relation to the staging of the Chapel Bridge and Water Tower in Lucerne

A Plan Lumière City of Lucerne

1. Light pollution

An artificial illumination of the evening sky through excessive light emission is not allowed. The Canton of Lucerne further prohibits the use of sky beamers. Lighting should be adjusted in order to avoid a harsh glare.

2. Energy efficiency

The use of light and the required energy supply should be planned carefully and economically. The level of efficiency and light efficacy of the lights and the operating system used should be as high as possible. The number of lights and the level and duration of illumination should be kept to an artistic and functional minimum.

3. Documents

With the exception of points 1 and 2 above, the following documents are of a purely informative character:

Plan Lumière

- Concepts of illumination:

http://www.stadtluzern.ch/de/aktuelles/projekte/projekteaktuell/projektinfos/?dienst_id=20667

- Recommendations and guidelines:

http://www.stadtluzern.ch/de/aktuelles/projekte/projekteaktuell/projektinfos/?dienst_id=20665&themenbereich_id=16&thema_id=115

B Ecology and preservation of nature

1. Chapel Bridge – protective measures for bats

The gaps in the chapel bridge's wooden planking serve as nursery roosts to the largest known colony of Daubenton's bats in the Canton of Lucerne (ca. 150-200 animals). Currently, most of the colony roosts in the northern third of the bridge; however, there are relocations on a regular basis.

The animals fly to their quarters by way of the bridge's underside and over the water. The river space directly surrounding the bridge further serves as an important hunting ground for them.

Bats and, in particular, their nursery roosts are strictly protected by federal law. These nocturnal animals react very sensitively to a direct lighting of their quarters or the paths leading there. In conclusion, a direct illumination of the bridge's underside or an increase in light pollution of the river space surrounding the bridge must be avoided at all costs.

These guidelines apply for the months of March to October; during the winter months of November to February, the animals reside elsewhere.

More information about the bat colony can be found at: <http://www.fledermaus.info/index.php?id=535>

2. Water Tower – protective measures for alpine swifts

The colony of alpine swifts currently nesting in the Water Tower numbers 60 breeding pairs. According to the red list of endangered species published by the Swiss Federal Office for the Environment, alpine swifts are potentially endangered.

Most of the breeding sites are located in the upper, wooden part of the tower. In order not to disturb the swifts' breeding activities, which take place between April and September, illumination of the upper part of the tower more than is currently the case is not permitted (as stated in the City of Lucerne's Plan Lumière).

3. River Reuss – water protection

Despite its urban surroundings and the busy riparian zones on either side of the river Reuss, the river functions as an important biosphere for a number of species (e.g. fish, insects, underwater plants, water birds, etc). Excessive light pollution must be avoided due to its possible negative impact on this habitat. Plan Lumière includes a guideline that specifies that the space of the river must be kept as dark as possible. If the staging of the bridge and tower involve the construction of fixed or temporary elements in the river, an application must be made for a special exemption (cf. e.g. [§37 ForA](#)).