

REPORT TO ASSETS AND OPERATIONS COMMITTEE WAR MEMORIAL AND OBELISK LIGHTING



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Agenda Item 9
Prepared by Planning and Facilities Officer

1.0 BACKGROUND

1.1 BACKGROUND AND EXISTING SITES

The committee has previously expressed a desire to increase the prominence of the memorials within Knutsford including the Centennial War Memorial in the library gardens and the Obelisk on Chelford Road.

Whilst there are existing lights at the library gardens these are not suitable for illuminating the memorial as they are positioned towards the wall of the library. The existing electrical supply to these lights could be utilised for a new installation; there is a confirmed fault which may be due to water ingress to the lights but it is presumed the electricity supply to the existing lighting system is functional.

The Obelisk currently has no electrical supply, but a new electrical supply can be created on the site utilising the low voltage line which runs under the verge.

The Crosstown War Memorial has no electrical supply and the grounds are not suitable for the installation of the required infrastructure for a new supply.

1.2 LIGHT POLLUTION

Noting the proximity to the highway of any lighting at the Obelisk, the Planning and Facilities Officer contacted Cheshire East Highways which supplied a guidance document from The Institute of Lighting Professionals which notes that when lighting vertical structures downward lighting should be utilised where possible. If there is no alternative to up-lighting, then all efforts to minimise spill light, around and over the structure should be taken.

For road and amenity lighting installations, obtrusive light should be minimised to reduce glare and sky glow (see annex for lighting terms and *Figure 1: Types of Intrusive Light*). Emphasis is placed on controlling light emissions towards the highway, so as not to adversely affect observers/motorists.

2.0 LIGHTING OPTIONS

2.1 SOLAR LIGHTING

A trial solar light (120 lumens) was purchased and installed at the Crosstown War Memorial. The existing street lighting overpowered any output. The light was then installed at the King Canute sculpture in the Council Office grounds but again the existing streetlighting was brighter than the

output of the light. The light was then moved to the Centennial War Memorial; whilst this was a notably darker area the light still had very little impact on the lighting of the memorial and faded quickly.

The electricians quoting for the installations were asked about solar lighting options and remarked that solar-cell technology may not create and maintain sufficient output to illuminate the landmarks.

An option for a solar system would be a two light (300 lumens per light) system with a large (2 no. 67cm x 58cm) solar panel and separate 2 x 12v battery stored in a weatherproof battery box. This is a notably large system than the single light tried with a large solar panel and battery capacity. The success of the system will greatly depend on the amount of light reaching the panel which in all locations is challenging due to tree cover. The cost for this system is £492.

2.2 STANDARD POWERED LIGHTING

The cost for a hard-wired system with timer and daylight sensor comprising two LED lamps and connected to the existing supply from the library gardens to illuminate the Centennial War Memorial would be £1,370.

The cost for a new electricity connection at the obelisk would be in the region of £1,000 (exclusive of traffic management). Only one of the three companies approached for a quotation submitted a quote.¹ The cost for a two light vertical narrow beam LED lamps including a sensor, timer and the feeder pillar for the electricity connection would be £3,605 making the total cost in the region of £4,605. The electrician advised that this would most likely only light the first 2m of the obelisk in order to minimise potential impact on passing motorists.

2.3 OPTIONS APPRAISAL

It is considered that the most suitable system for lighting the Centennial War Memorial is a hard-wired system. Whilst the solar system would be a cheaper alternative for optimum performance it requires the solar cell to be facing southwards and be ideally located at height and in full sun for as long as possible. The site has a number of trees which will reduce the amount of light captured by the cells and there is a higher risk of vandalism.

The proximity of the obelisk to traffic (approx. 60cm from the base of the obelisk to the edge of the road) and the bend in the road at this location makes lighting potentially dangerous. A hard-wired system would be expensive, and the solar system may be ineffective due to the tree cover.

The ground around the Crosstown War Memorial is shaded and unlikely to sufficiently charge a solar light system. There is not a suitable electricity supply in this location.

3.0 DECISION REQUIRED

The committee should consider the options for lighting of the memorials as outlined.

The committee has budget within the Council Offices cost centre for the lighting of the war memorial due to the delay in transfer resulting in a projected underspend against budget.

ANNEX A: GLOSSARY OF TERMS

¹ One company refused to quote due to the high-risk of glare to traffic, the second declined to quote on the basis of the recommendation to light from above.

Below are terms used for types of Obtrusive light. These are all forms of pollution, which may also be a nuisance, adversely affect fauna and flora and waste money/energy.

SKY GLOW - The brightening of the night sky.

GLARE - The uncomfortable brightness of a light source when viewed against a darker background which can be a visual distraction and can present a hazard.

LIGHT SPILL - The spilling of light beyond the boundary of the area being lit, sometimes known as Light Trespass.

LIGHT INTRUSION – Nuisance light, harmful or distracting.

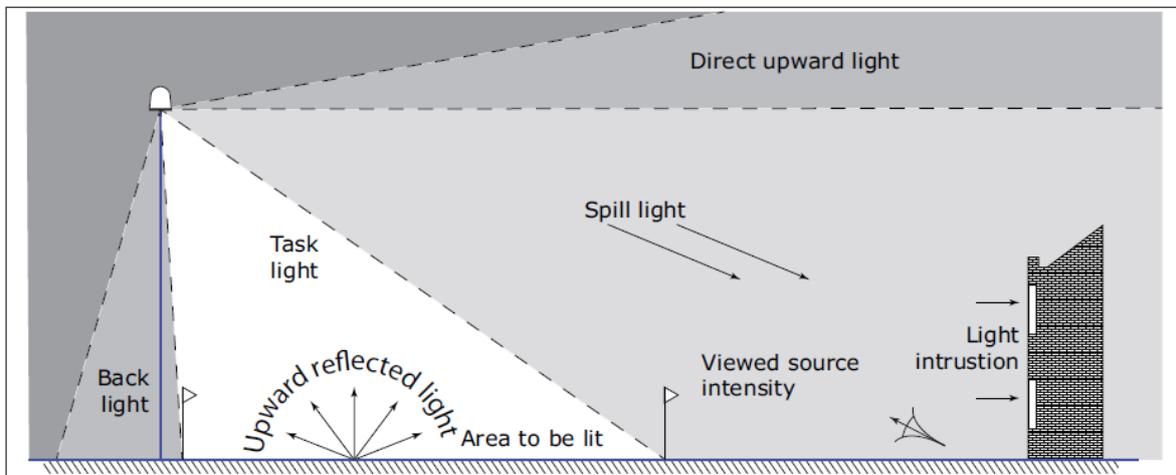


Figure 1: Types of intrusive light