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**Debating Hall Lighting Calculations & proposed upgrade plan**

Agenda Item X

**Ethical & Environmental Meeting- Monday Xth MONTH YEAR**

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| **Author/contact:** | Lee Mogridge – Facilities Manager  Max Williams – Sustainability Officer |
| **Purpose:** | For Discussion and information |
| **Executive Summary:** | The lighting system in the Debating Hall, used for performances and conferences, is extremely outdated, with some fixtures dating back to the early 1960s. It is now becoming increasingly difficult to source replacement bulbs, as halogen and incandescent lamps are obsolete. Therefore, a decision should be made to initiate a phased upgrade to LED lighting. |
| **Link to Strategic Plan** | Aim 6 – Facilities – Sustainable Management |
| **Recommendation:** | Discuss. |

1. **Overview**

For many years, the Guild has offered Technical Services, a tailored support service for in-house stage shows and performances, and more recently for external room bookings, as the organisation continues to expand its portfolio. The current lighting system in the Debating Hall still operates on halogen, incandescent, and, in some cases, metal halide lighting, all of which are now considered obsolete and expensive to maintain. While replacement lamps can still be sourced, they are increasingly rare and often cost around £100 per lamp. Within the next 18 months, it is likely that replacement lamps will become unavailable, signalling the natural end of life for our in-house lighting equipment.

The current lighting system is also unsustainable, with energy costs significantly higher compared to modern LED lighting. It is now time to consider implementing a phased upgrade plan for the outdated lighting system.

1. **Energy Efficiency and cost savings**

Over the past three years, the Guild has made significant efforts to reduce its energy consumption and carbon footprint, achieving a 18% reduction in energy usage and a 12% decrease in CO2 emissions. While the reduction in late-night events, specifically FAB XO, has contributed to some of these savings, the primary success is due to our day-to-day management, understanding, and commitment to sustainability.

The introduction of SMART LED lighting in our high-traffic areas has significantly contributed to these savings, and the recent upgrade of The Underground lighting system will further support us in maintaining and achieving our sustainability targets.

We frequently discuss LED lighting because it is where we can make the greatest impact. Due to the age of our building and the presence of single-glazed windows, achieving energy savings in other areas, such as heating, remains a significant challenge. It is unlikely that the building will undergo any major structural changes to address this issue in the foreseeable future.

The Sustainability Officer, Facilities Manager, and the Technical Services team have collaborated to produce estimated figures comparing the energy consumption (kWh) of our current lighting system versus the projected costs if we upgrade to energy-efficient LED lighting. These estimates are outlined in Appendix A. The total energy usage is currently estimated at 6,845.8 kWh, with an approximate cost of £1,500. With an LED lighting upgrade, energy consumption would reduce to 2,691.4 kWh, bringing the estimated cost down to £462.00.

Upgrading the existing lighting will not only bring quality but bring additional cost savings as the project progresses. There will be significantly less setup and post-production time required for Tech Services, as the newer lighting can be controlled and adjusted remotely. This, in turn, will result in cost savings for student groups, conferences, and banqueting events, especially when specific requirements are needed for productions and room bookings. Labor costs will be dramatically reduced.

1. **Capital Expenditure**

To update the current lighting system, capital expenditure would be required, with estimated costs ranging between £25,000 and £35,000. It is therefore recommended that we begin exploring this option now and plan a phased upgrade over the next 3 to 5 years.

**4.** **Recommendation**

The committee is asked to discuss the next steps and the implementation of a ‘working group’ to help the project progress to the next stage.