

## **1.0 INTRODUCTION**

The heating at the QE2 building has not been working since last winter. As the heating involves an air handling unit, it is quite a complex issue, and it has been difficult to find contractors who are able to work on it. A report was commissioned to look at the energy strategy for the QE2 building before deciding on how best to proceed. This report has recently come through and as we are now heading into the colder months it is vital that the heating is sorted as soon as possible.

The QE2 building is currently used consistently for 30 hours a week, generating an annual income of £18,750 + VAT. This amount is then supplemented by ad hoc bookings, usually events and parties. Our heaviest users of the QE2 building, the bowls club and the NHS, have requested that this issue be resolved, and they are happy to work with us on resolving the issue.

Prior to receiving the Energy Strategy report, I started to investigate different options to mitigate the issue and I have outlined these below followed by the advice from the Energy Strategy report.

## **2.0 RELOCATION OF BOOKINGS**

As we have other facilities available, I have investigated the possibility of relocating the bookings at QE2 elsewhere either temporarily or permanently. Unfortunately, our other facilities are not able to meet the requirements of our two main users.

- The bowls club need a large space for their mats meaning the only suitable location would be Gang Warily Sports Hall, they do not have a problem with this however we do not have availability in the hall at the times they need for their sessions, in addition to this they are also looking to add an extra session on a Thursday next year which Gang Warily would also not be able to cater for.
- The NHS booking requires a large area that can be kept private, whilst we could cater for one of their days relocating to Jubilee Hall, we would not be able to cater for the other one. The NHS booking have agreed that they could make Jubilee Hall work for a short period if required but it is not ideal for them.

As well as this, relocating any bookings decreases our potential to grow our customer base at other sites and so is not an option I recommend pursuing.

### 3.0 TEMPORARY INFRARED HEATERS

To ensure our bookings can continue to use the QE2 building for as long as possible, I have identified some standalone infrared heaters that could be purchased at a cost of £27.49 + VAT each, to alleviate the issue whilst a long-term strategy for the heating issue is developed. This would be cheaper than hiring heaters as we did when the problem first arose.

The problem with this solution is that the temporary heaters are unlikely to be good enough to alleviate the issue fully and as the heaters would be stand-alone, they would also present a significant risk to users of the building that would need to be carefully controlled.



### 4.0 PERMANENT INFRARED HEATERS

Having researched temporary infrared heaters and the benefits they provide, I have also looked into having a proper infrared system installed. I have received specifications for an infrared heating solution from BN Thermic that would see 8 infrared heaters installed at QE2, suspended from the ceiling of the hall. This system provides the following benefits:

- Infrared heaters are powered through electricity and not gas meaning that they can be combined with renewable energy to reduce costs and carbon emissions
- Infrared heaters provide radiant heat which heats up people and surfaces directly instead of warming the air in the building. This means large amounts of energy are not wasted heating the air which in a large hall is just going to rise.
- Infrared heaters provide immediate warmth meaning there is no need to have the heating come on before bookings start. In addition to this, bookings can have doors/windows open for ventilation without compromising the warmth of the building.
- The system can be provided with a control panel that allows users of the hall to turn the heating on when they are using it with an automatic switch off after a defined period. This ensures the heating can never be left on when the building is not in use and means we don't have to amend the heating schedule when we have ad hoc bookings

This solution will only provide heating for the hall, however there is not really any immediate requirement to heat the other parts of the building. The cost of supplying the above equipment from Edmunson Electrical, including a 30% discount is £4251.80 + VAT.

I am currently waiting on a quote from R May Electrical to have this system installed and so do not currently have the full costings for this project. However, I anticipate that this will be a cost-effective solution to secure the income of QE2 hall.

## **5.0 ENERGY STRATEGY REPORT**

Regarding the heating efficiency of the building, the report suggests that the ideal solution would be to continue to maintain our existing gas boiler system. However, as the system is now completely non-functional, this is no longer an option and if we are going to invest in resolving the heating issue then it makes sense to look at long term recommendations from the report.

The two main alternative sources of heating recommended by the report are infrared panels and air source heating, ground source heating is not recommended. Whilst there are pros and cons to both infrared and air source, I believe that infrared is still the best option for the QE2 hall, primarily due to the cost and time of getting this system installed being much lower than an air source system. The report also provides recommendations for combining both infrared and air source heating, so installing an infrared system for the hall does not rule out the option of installing air source at a later date if it is deemed necessary.

Moving from a natural gas heating system to an electric one does provide some risk with the current energy market however the Council is currently on a fixed energy contract until August 2024. In the meantime the report suggests looking into Solar PV for the QE2 building and this would help make the most of the new system.

## **6.0 FUNDING**

I have identified some potential forms of funding for this project, however due to the urgent nature of the work I would recommend that we look to use this funding for other projects that are not so time sensitive.

## **6.0 RECOMMENDATIONS**

That the Council proceed with the installation of Infrared Heaters up to a maximum cost of £7500 + VAT. Funds to be met from general reserves.

That the Council investigates the option for installing Solar PV at QE2 based on the recommendation from the Energy Strategy Report.

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