

## Councillors Briefing Note

### No. 291

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### **Proposal for reducing overheating in Trowbridge Library at County Hall**

#### **Background**

The library space is currently overheating, mainly due to the solar gains from the south-east facing glazing. This elevation receives sunlight for much of the day and the heat that is added to the space is measurable and significant. Currently this is managed by closing mechanical blinds inside the room adjacent to the windows. This is partially effective, but removes much of the good quality natural light from the space. Unfortunately the blinds themselves become hot and emit the heat into the room, which reduces the effectiveness of this solution.

Additional capacity for the ventilation system has already been installed to reduce the effect and the space is chilled using cooling equipment that is expensive to run, but library users and operators complain regularly that the space is still much too hot at certain times.

A proposal was presented to reduce solar gain through the glazing. Several options were considered.

#### **Recommended and Approved Option**

Based on the business case and technical feasibility the approved option is to apply a film to the existing glazing units.

A tinted film will be applied internally that will not require the removal of the existing white lettering. The tinted film will be a bronze mirrored effect when viewed externally which will be consistent with the glazing to the north east elevation adjacent to the main entrance to County Hall which has a similar effect. When viewed from within the building it will still allow people to see out.

This film option is approximately 80% effective at reducing solar gains. The north east elevation library glazing would not be treated and this is the elevation that is seen from the car park and by most building users.

## **For Information Only – Rejected Options**

### **Option 1 - Visors**

The possibility of fitting visors to the glazing (of a similar type as used at Monkton Park for example) has been considered. This has a significant visual impact and would substantially change the appearance and characteristics of the building on that elevation. This would be clearly visible from a distance. It is not known whether this would require planning permission. The structural implications are not defined. This represents an expensive option that will take many years to pay back, if at all.

### **Option 2 – Alternative Glazing Units**

There are other glazing unit options available on the market to replace those already installed, including those with integral blinds between the panes of glass and with more effective special tinting. While these would likely be much more effective than the existing glazing units the costs, and level of disruption to the library users, are very significant. This option would be unlikely to pay back.

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