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Sustainability strategy development;
it's the clever choice

Building overheating advice and support-what we can do for you?

Is your building overheating in the summer? - **if so, read on!**

Our client, an NHS GP surgery have a situation where their building overheats in the summer months. The design and orientation of the building is such that the building receives a heat gain as a result from the sun path directly placing heat on the building mass.

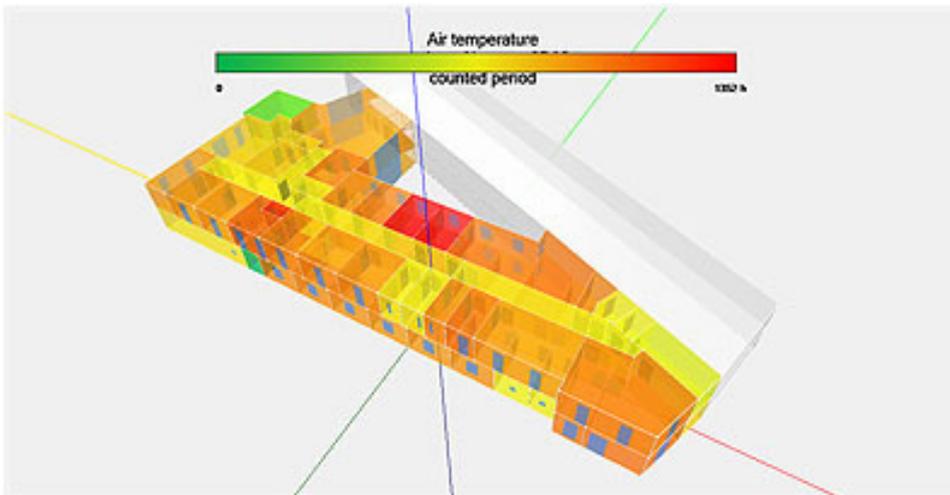
The heat gain increases the building temperature significantly and the current air handling system struggles to mitigate the additional heat impacts.

The client, wanted a solution that helped to:

1. Identify the problem.
2. Consider what could be done and indicate the relevant impacts.
3. Help them with the decisions that needed to be made.

Well.....what did we do?

We modelled the building using Vabi Elements thermal and energy modelling software.



The diagram shows the overheating areas-bright red and orange in comparison to the rest of the building.

IN THIS ISSUE

THE THERMAL ENVIRONMENT

Thermal comfort is essential for a happy workforce.

VABI Elements Thermal modelling software can help with building performance.

The client is more knowledgeable now of how the building performs in the summer's months.

Spotting opportunities for improvement such as when the building is overheated or overcooled.

Helping the client to make the right decisions!

NEWSLETTER

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Building performance indicators

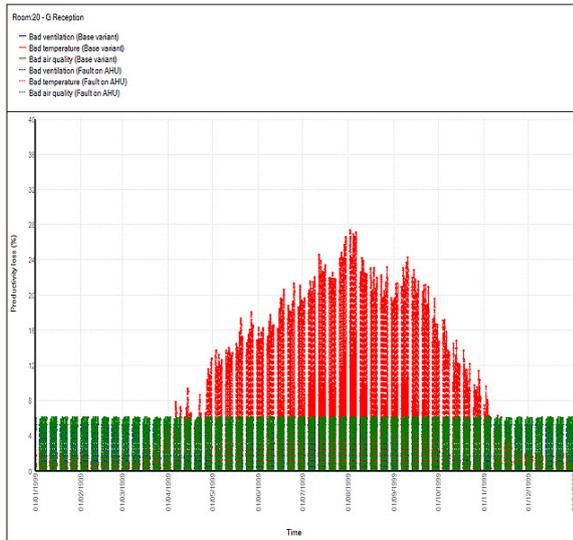
Based on the assessment we ran a series of differing scenarios for the client based on engineering options and gave the client a menu of interventions that could be made to solve the problem such as:

The outcome- The Engineering Choice Menu:

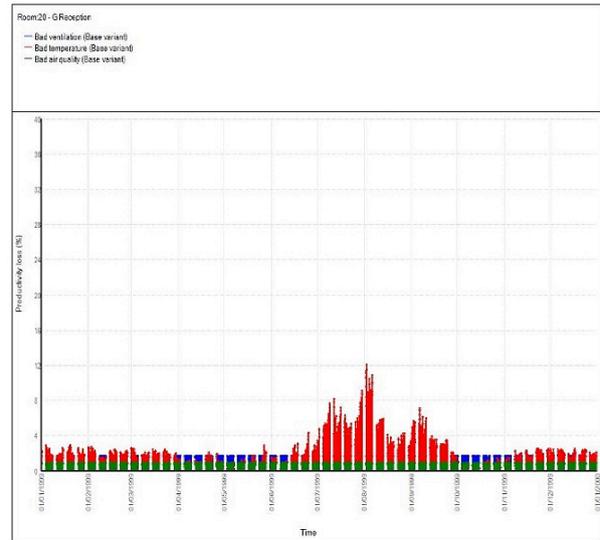
1. Extend the current ventilation system
2. Change the glazing for enhanced solar transmittance performance
3. Install a Bris Solei solar shading unit
4. Change the Air Handling System for an improved system including mechanical cooling
5. Completely swap out the system for new advanced indoor air quality management system

The thermal modelling showed the client the impacts of each choice option individually or as collection of options.

Before our intervention



After our intervention



The building performance overall

It is predicted that the building will still overheat but not as much as previously. When the budget allows the client will extend the current air handling system. And at each stage we will remodel the benefits and test them against the core model.

The benefits

The client is more knowledgeable now of how the building performs in the summer's months. They now are action based-they have placed orders for improving the glazing and are underway with improving system controls.

Once done, the modelling will continue to advance the client through the next steps. The modelling will then predict the energy consumption and the thermal comfort levels of the building. Again, helping the client to make the right decisions.

Again, helping the client to make the right decisions!

***Could you use this help? If so call us on 07500 962548.
We would be delighted to hear from you.***

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