

14th February 2019

Dear Michael

As you are probably aware the Trust had been working on the heating and the hot water problems within the courtyard clinic over the past few weeks. Our initial review of the infrastructure and the problems that existed have proven to be substantially understated. We have systematically worked through the problems in a bid to rectify the situation, however its clearly evident that a lack of investment and routine maintenance over a considerable number of years has led to a series of system failures which have proved catastrophic for the heating provision.

Our initial investigations identified that the main plant that provided the heating was beyond economic repair, this plant was replaced with new plate heat exchangers towards the end of the summer. At the time the heating pumps were not replaced and this had to be undertaken once the replacement was found inadequate. After the installation of the plate heat exchangers it was found that the radiators were not giving the appropriate heat, therefore due to the age of the radiators (also beyond life cycle) it was decided that these also needed to be replaced. At present 80% of all radiators have been replaced over the past 3 weekends and using our in-house team.

It has been found that the remaining problems are originating from the circulation system, where there is insufficient flow to keep the radiators warm. This could be due to a number of reasons that are being investigating by the Project Manager and external sub-contractor. The emerging evidence is that a combination of sludge, blocked balancing valves and air locks are preventing proper circulation. We have had to undertake a systematic flushing of the system which again has been undertaken out of hours by our in-house team.

The air curtains in the form of small radiators around the actual courtyard which formed the basis of the overall heating design for the building are not functioning and these need to be stripped back flushed and reinstated. Once we can recreate these air curtains we will minimise the heat loss to the building and in turn allow the main heating system to maintain adequate temperatures.

At present around 65% of the radiators are working and providing heat, however the system needs to be bled every day. An instruction has been given to the mechanical team to do this every morning whilst we instigate the further works described above.

With our external advisers we have drawn up a plan and have placed orders for replacement parts with our suppliers. Given the restriction of working hours and our wish to maintain a functioning unit during normal working hours the timetable is somewhat elongated, but is now a realistic timetable which we can publish to give the users a definitive timetable for completion. The proposed dates are as follows:

- Survey to obtain pipe drawings needs to be completed. (2 weeks)
- The system needs to be cleaned. (1 week)
- The pumps need to be replaced. (3 weeks – dependent on lead time)
- The balancing valves either need to be replaced or cleaned. (4 weeks)
- Any leaks need to be identified and addressed. (Following survey - 1 week)

Once the circulation is working this will address the majority of the issues; the expected timeframe for completion of these works given that some of the above actions can be done in parallel is 8 weeks.

The hot water system is near the end of its natural life. Whilst we are carrying out the works for the heating systems new controls and pipelines have been installed and are nearly ready for change over. This will be completed once the heating issues are resolved. We are however maintaining water temperatures at this moment.

In the interim period we are continuing to ensure that the heating is maintained at a reasonable level by the use of portable heaters throughout the building. There is an operational process in place whereby the building is visited by are out of hours teams some hours before the unit is opened to turn the heating on and achieve the temperature levels required prior to staff arriving on site.

Is regrettable that we find ourselves in this situation and is evident that more investigation should have been done towards the end of the summer when we bought new heating systems to deal with this problem. As we install the new system and carry out the much-needed maintenance we are ensuring that a planned preventive maintenance regime is put in place to avoid this situation arising again.

I would like to thank you and your staff for your forbearance in this matter and can assure you that we are working as fast as we can to rectify the situation.

Yours

Kevin

Kevin Howell

Executive Director of Estates and Facilities

St George's University Hospitals NHS Foundation Trust